

Panasonic

DVD Player

DVD-T2000

Operating Instructions



Before attempting to connect, operate or adjust this product, please read these instructions completely. Please save this manual.



VQT7096

Safety information

Note:

This unit can be used only where the power supply is AC 120 V, 50–60 Hz. It cannot be used elsewhere.

CAUTION:

DVD PLAYER IS A CLASS I LASER PRODUCT. HOWEVER THIS PLAYER USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE PLAYER CORRECTLY AS INSTRUCTED.

WHEN THIS PLAYER IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS PLAYER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

CAUTION: (Canada Only)

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

CAUTION - LASER RADIATION WHEN OPEN DO NOT STARE INTO BEAM.	(Inside of product)
ATTENTION - RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.	(Intérieur du produit)
VORSICHT - LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT IN DEN STRAHL BLICKEN.	(Im Inneren des Gerätes)
ADVARSEL - LASERSTRÅLING VED ÅBNING. SE IKKE IND I STRÅLEN.	(Indersiden af apparatet)
ADVARSEL - LASERSTRÅLING NÄR DEKSEL ÅPNES. STIR IKKE INN I STRÅLEN.	(Produktets insida)
VARNING - LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. STIRRA EJ INN I STRÅLEN.	(Apparatens insida)
VARO! - AVATTAESSA OLET ALTIIDIN LASERSÄTEEN YLLE. ÄLÄ TUJOTA SÄTEESEEN.	(Tuotteen sisällä)
注意 - ここを開くとレーザー光がでます。 レーザー光をのぞきまなしないでください。	(製品の内部)



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

FCC NOTE: (U.S.A. Only)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, follow the attached installation instructions and use only shielded cables when connecting to other devices. Also, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

THIS DEVICE IS INTENDED FOR CONTINUOUS OPERATION!

Precautions

Please read these precautions before operating this unit.

■ Power cord protection

To avoid any malfunctions of the unit, and to protect against electric shock, fire or personal injury, please observe the following.

- Hold the plug firmly when connecting or disconnecting the AC power cord.
- Keep the AC power cord away from heating appliances.
- Never put any heavy object on the AC power cord.
- Do not attempt to repair or reconstruct the AC power cord in any way.

■ Placement

Avoid placing the unit in areas of:

- direct sunlight or heating radiators, or closed automobiles.
- high temperature [over 35°C (95°F)] or high humidity (over 90%)
- much dust

As the internal parts may be seriously damaged.

■ Nonuse Periods

When the unit is not being used, turn the power off.

When left unused for a long period of time, the unit should be unplugged from the household AC outlet.

■ No fingers or other objects inside

- Touching internal parts of this unit is dangerous, and may cause serious damage to the unit. Do not attempt to disassemble the unit.
- Do not put any foreign object on the disc tray.

■ Keep away from water/magnet.

- Keep the unit away from flower vases, tubs, sinks, etc. If liquids are spilled into the unit, serious damage could occur.
- Never bring a magnet or magnetized object near the unit.

■ Stacking

Place the unit in a horizontal position, and do not place anything heavy on it.

■ Condensation

Moisture may form on the lens in the following conditions...

- immediately after a heater has been turned on.
- in a steamy or very humid room.
- when the unit is suddenly moved from a cold environment to a warm one.

If moisture forms inside this unit, it may not operate properly.

In this case, turn on the power and wait about one hour for the moisture to evaporate.

■ If there is noise interference on the TV while a broadcast is being received

Depending on the reception condition of the TV, interference may appear on the TV monitor while you watch a TV broadcast and the unit is left on. This is not a malfunction of the unit or the TV. To watch a TV broadcast, turn off the unit.

Dear Customers

May we take this opportunity to thank you for purchasing this Panasonic DVD player.

We strongly suggest that you carefully study the Operating Instructions before attempting to operate the unit and that you note the listed precautions.

The model number and serial number of this product can be found on either the back or the bottom of the unit.

Please note them in the space provided below and retain this booklet as a permanent record of your purchase to aid identification in the event of theft.

MODEL NUMBER _____

SERIAL NUMBER _____

DVD Features

■ A completely new dimension in video entertainment

- Subtitles may be displayed in one of a maximum of 32 languages*.
- The audio soundtrack can be heard in up to 8 languages*.
- The multi-angle function allows you to choose the viewing angle of scenes which were shot from a number of different angles. (Limited to DVD discs recorded with multiple camera angles.)

*The number of the languages recorded is dependent on the software.

■ High quality digital audio

- With the linear PCM sound of a 48 kHz/16 bit through 96 kHz/20 bit, audio quality exceeding that of audio CDs becomes possible. Also adaptable to surround sound through Dolby Digital Surround audio.

■ Many convenient features

- Direct access of favorite scenes (title/chapter search).
- Programming of up to 3 scenes in memory (markers).
- Parental lock settings to prevent play of discs unsuitable for some audiences.

■ Compatible with video CDs and audio CDs as well as DVD

Disc formats supported by this player

The unit can play back discs bearing any of the following marks:



DVD
[3" (8 cm) disc/5" (12 cm) disc]

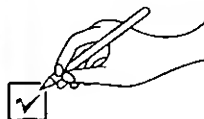


Video CDs
[3" (8 cm) disc/5" (12 cm) disc]

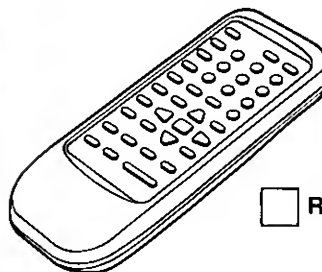


Audio CDs
[3" (8 cm) disc/5" (12 cm) disc]

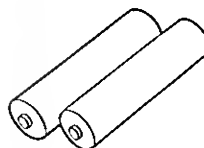
Accessories



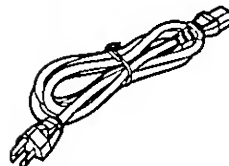
Please check and identify the supplied accessories.



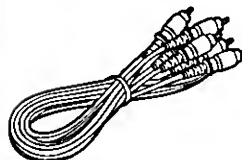
☐ Remote control unit 1



☐ Dry batteries 2
for remote control unit
[size "AA" (R6P)]



☐ AC power cord 1



☐ Video/audio cord 1

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DVD:

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• Rapid advance (Rapid reverse)	15
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Initial Settings:

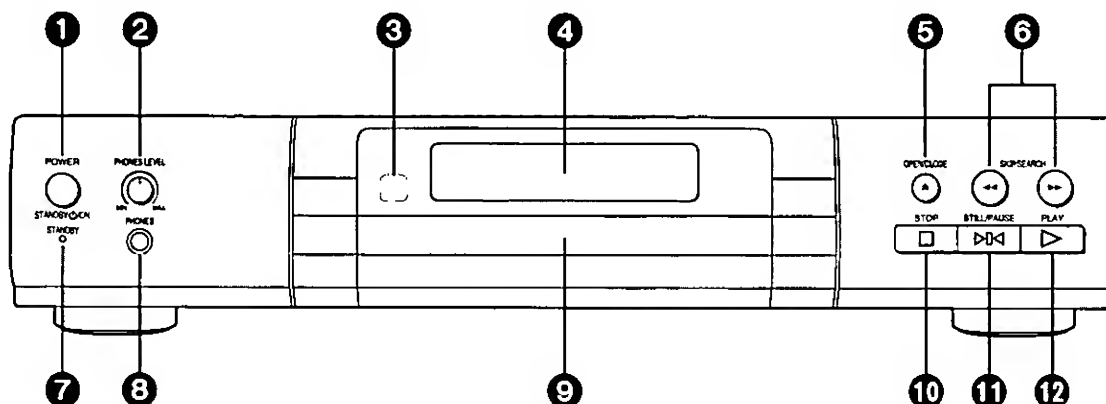
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Control reference guide

Main unit



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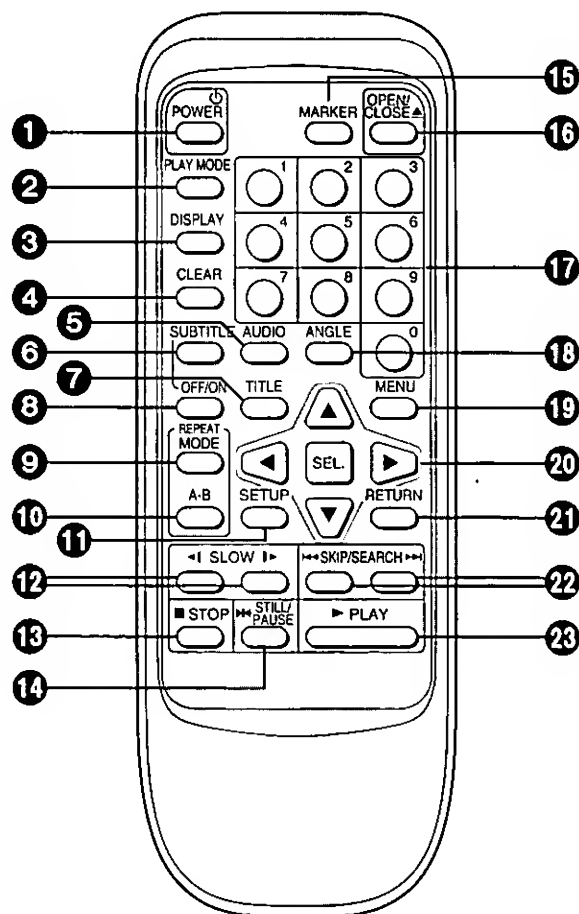
- 1 POWER, STANDBY \square /ON button** 13, 26
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
- 2 PHONES LEVEL control**12
- 3 Remote control signal sensor**12
- 4 Display window** 7
- 5 OPEN/CLOSE button** 13, 26
- 6 SKIP/SEARCH buttons** 15, 28

- 7 STANDBY indicator**
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
- 8 PHONES jack** 12
- 9 Disc tray** 13, 26
- 10 STOP button**15, 28
- 11 STILL/PAUSE button** 16, 29
- 12 PLAY button**13, 26

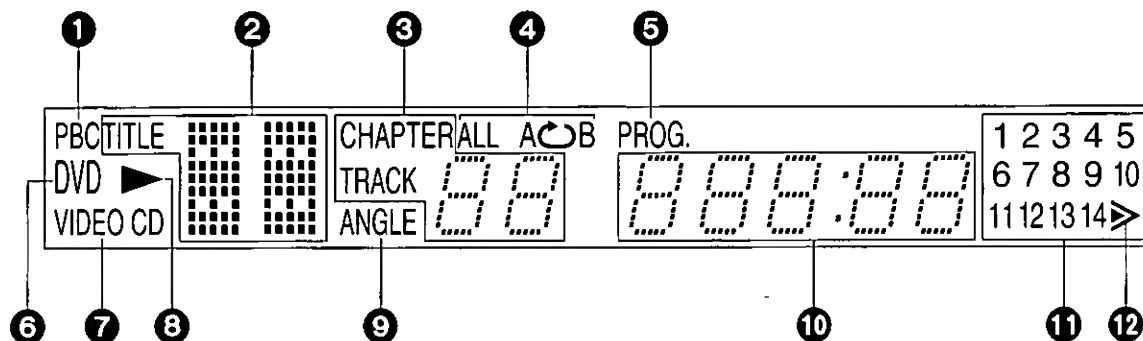
Remote control unit

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- 1 POWER button** 13, 26
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- 5 AUDIO button** 22, 33
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- 14 STILL/PAUSE button** 16, 29
- 15 MARKER button**21
- 16 OPEN/CLOSE button** 13, 26
- 17 Number buttons** 13, 26
- 18 ANGLE button**24
- 19 MENU button**25
- 20 Cursor buttons/SEL. button** 13, 26
- 21 RETURN button** 14, 27, 35~40
- 22 SKIP/SEARCH buttons** 15, 28
- 23 PLAY button** 13, 26



Front panel display



The figure above shows the front panel with all the displays on.

- ❶ Illuminates during menu play
[Video CD with playback control only] (see page 26)
 - ❷ Indicates the title number [DVD only]
 ■■■ : Illuminates during still picture (pause) mode (see pages 16 and 29)
 - ❸ Indicates the chapter number* [DVD]
Indicates the track number* [Video CD/Audio CD]
 - ❹ Illuminates during repeat play
(see pages 20 and 31)
- Repeat of title/chapter/track
- ALL

Repeat of entire disc contents (disc repeat)
- A B

Repeat of a section between two specific points (A-B repeat)
- ❺ Illuminates during program play
[Video CD/Audio CD] (see page 32)
 - ❻ Illuminates when a DVD is loaded
 - ❼ Illuminates when a video CD or an audio CD is loaded
 - ❽ Illuminates during playback
Flashes on and off while the RESUME function is ON
(see pages 15 and 28)

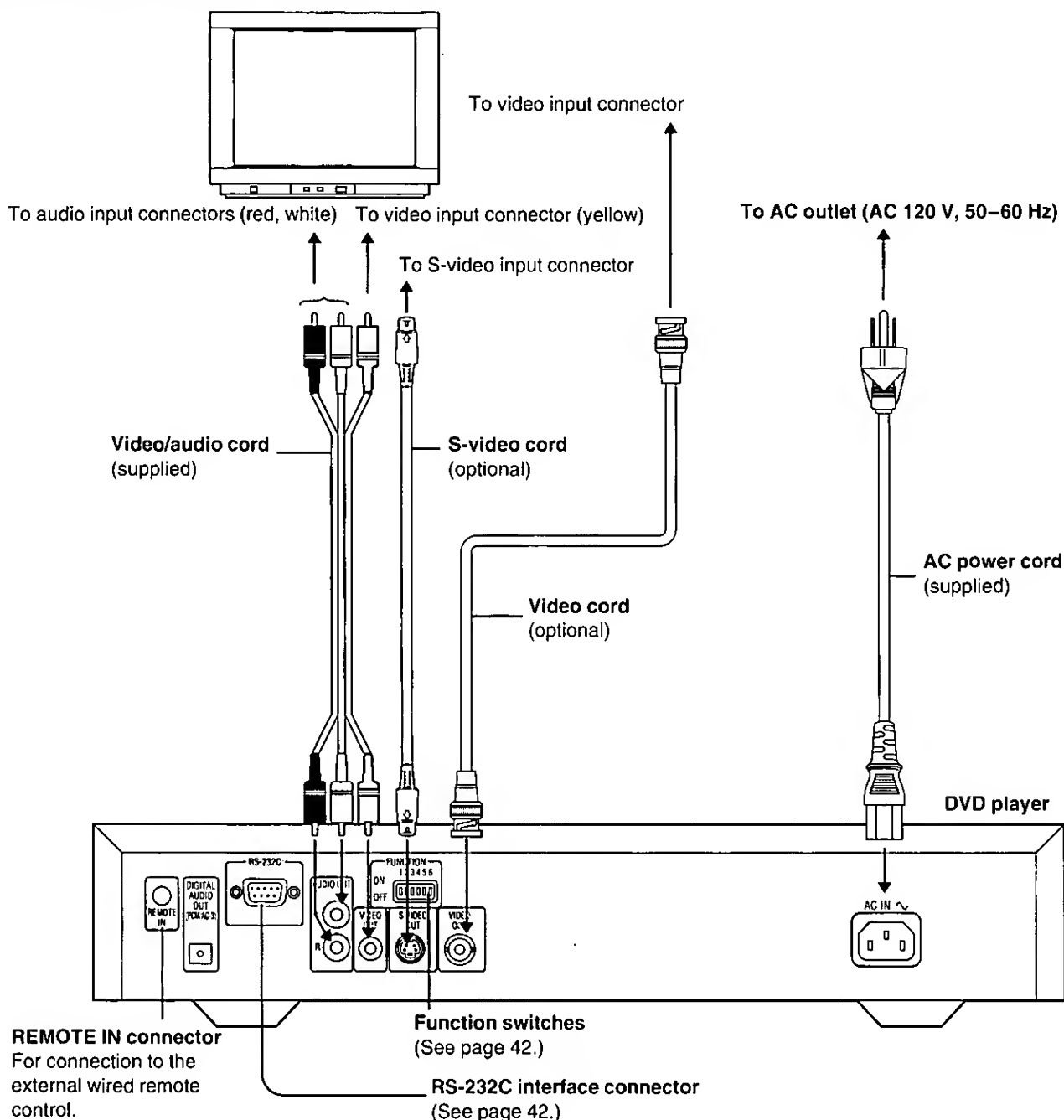
- ❾ Illuminates when it is possible to switch the angle
[DVD only] (see page 24)
 - ❿ Indicates the total playing time on a disc
[Video CD/Audio CD]
Indicates the elapsed playing time from the start of the title/track*
- Messages**
- OPEN:** The disc tray is open.
 - CLOSE:** The disc tray is being closed (retracted).
 - NO DISC:** No disc is loaded.
 - NO PLAY:** Playback is impossible.
 - DVDs for which playback is prohibited by the setup "RATING" (see page 34)
 - DVDs with a Locale No. other than #1 (see page 50)
 - DVDs of PAL system (see page 50)
 - ⓫ Indicates the list of chapter numbers [DVD]
Indicates the list of track numbers
[Video CD/Audio CD]
 - When playback of a chapter/track is finished, its corresponding number is turned off.
 - ⓬ ➤: Illuminates for a disc containing 15 or more chapters/tracks

*In the case of some DVDs, the chapter numbers and elapsed playing time may not illuminate on the display. Also, the track numbers and elapsed playing time do not illuminate during video CD menu play (see page 26.)

Basic connection

- Set the power switches on the DVD player and equipment to be connected to OFF before connections are made.
- Read through the instructions for the equipment to be connected.
- Be sure that the colors of the connectors and plugs match up when connecting the cord.

Connecting to a stereo TV set



S-video output connector

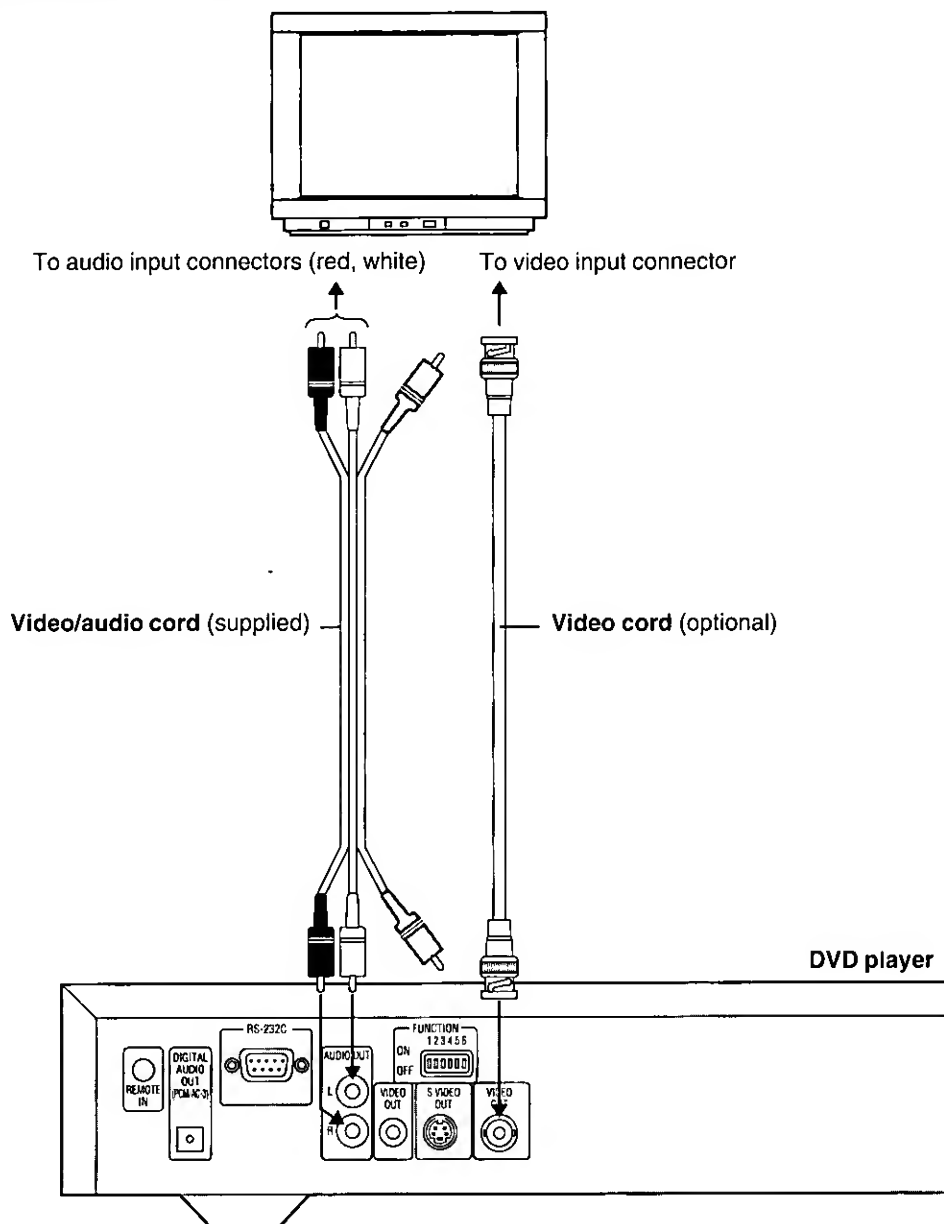
The S (separate) video output connector separates the color (C) and luminance (Y) signals before transmitting them to the TV set in order to achieve a sharper picture.

Use the S-video cord (optional) when connecting the player to a TV set equipped with an S-video input connector for the best picture clarity possible.

Notes:

- During DVD play, the TV volume may be at a lower level than during TV broadcasts, etc. If this is the case, adjust the volume to the desired level.
- If the DVD player is connected to the TV through a video cassette recorder, the picture may not be played back normally with some DVDs. If this is the case, do not connect the player via the VCR.

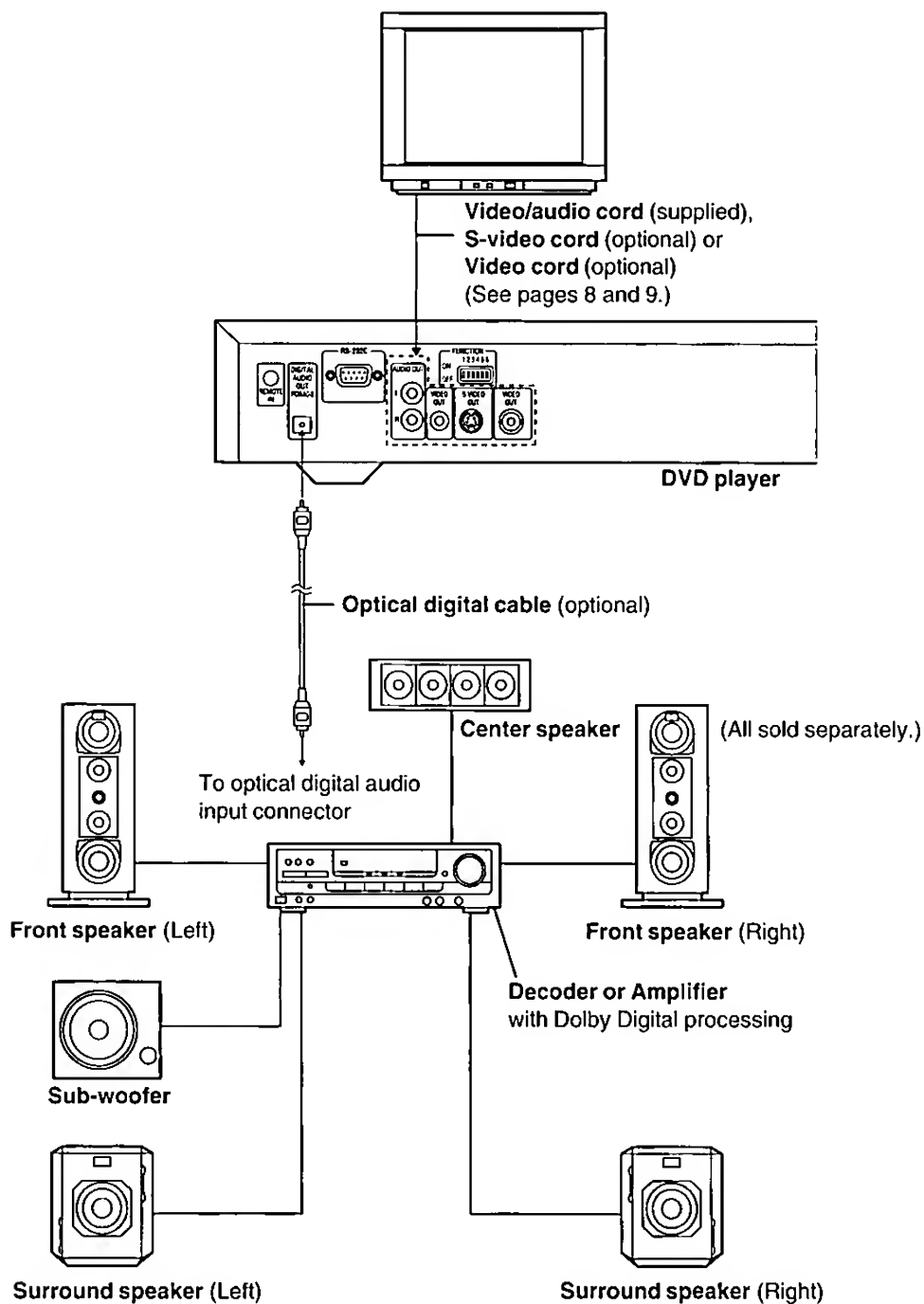
Connecting to a monitor



Optional connection

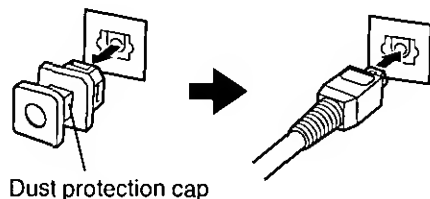
Connecting to a decoder or amplifier with Dolby Digital (AC-3) processing

When playing discs displaying the Dolby Digital mark, the Dolby Digital bit stream is output by using a decoder or amplifier (not supplied) equipped with a Dolby Digital processor. When playing discs provided with the Dolby Digital or AC-3 logo, you can enjoy theater-quality audio right in your own home.



Notes when connecting the optical digital cable

- Remove the dust protection cap from the connector and connect the cable firmly so that the configurations of both the cable and the connector match.



- Keep the dust protection cap and always reattach the cap when not using the connector to protect against dust.

Concerning the digital sound output

Depending on the disc format, either Dolby Digital (AC-3) sound or Linear PCM sound will be output from the unit's optical digital output connector (PCM/AC-3) as shown in the table below.

Disc	Sound recording format	Optical digital sound output from connector
DVD	Dolby Digital	Dolby Digital bit stream
	Linear PCM	Linear PCM (48 kHz sampling only)
Audio CD	Linear PCM	Linear PCM (44.1 kHz sampling)
Video CD	MPEG	Linear PCM (44.1 kHz sampling)

Note:

- For DVDs, sound having 96 kHz sampling is not output from the unit's optical digital output connector.

For your reference:

- Dolby Digital (AC-3) is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in audio CDs. While audio CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/24 bit.
- If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1-channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark.

Caution for the optical digital audio output connector:

- Do not connect an amplifier (with an optical digital input connector) which does not contain the Dolby Digital (AC-3) decoder.
- Otherwise any attempt to play DVDs may cause to such a high level of noise that it may be harmful to your ears and damage your speakers.
- Video CDs and audio CDs can be played as they would normally be played.

Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby", "AC-3" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Copyright 1992 Dolby Laboratories, Inc. All rights reserved.

Remote control preparation

Battery installation

Insert the batteries while observing the correct (+) and (-) polarities as illustrated at right.

Service life of batteries

- The batteries normally last for about one year although this depends on how often and for what operations the remote control is used.
- If the remote control unit fails to work even when it is operated near the player, replace the batteries.
- Use size "AA" (R6P) batteries.

Notes:

- Do not use rechargeable (Ni-Cd) batteries.
- Do not attempt to recharge or short-circuit the batteries.
- Do not drop, step on or otherwise impact the remote control unit. This may damage the parts or lead to malfunctioning.
- Do not mix old and new batteries.
- If the remote control unit is not going to be used for a long time, remove the batteries. Otherwise, electrolyte may leak which may lead not only to malfunctioning but also to burns if contact is made with the electrolyte.
- Wipe away any electrolyte leaking inside the remote control unit, and install new batteries.
- If any electrolyte should come into contact with parts of your body, wash it off thoroughly with water.

Remote control operation range

Point the remote control unit no more than about 7 m (23 feet) from the remote control sensor and within about 60° of the front of the unit.

- The operating distance may vary according to the brightness of the room.

Notes:

- Do not point bright lights at the remote control sensor.
- Do not place objects between the remote control unit and the remote control sensor.
- Do not use this remote control unit while simultaneously operating the remote control unit of any other equipment.

Connecting headphones

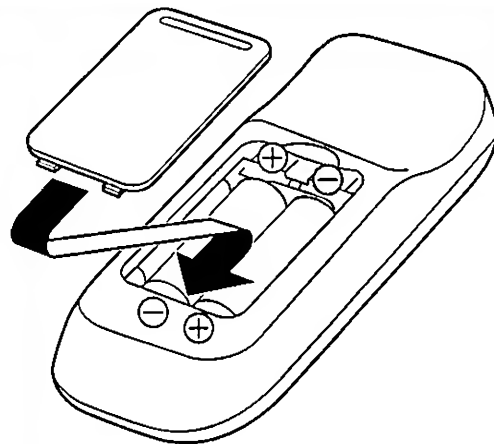
1 Connect the headphones.

- Headphones with a large stereo plug can be connected.

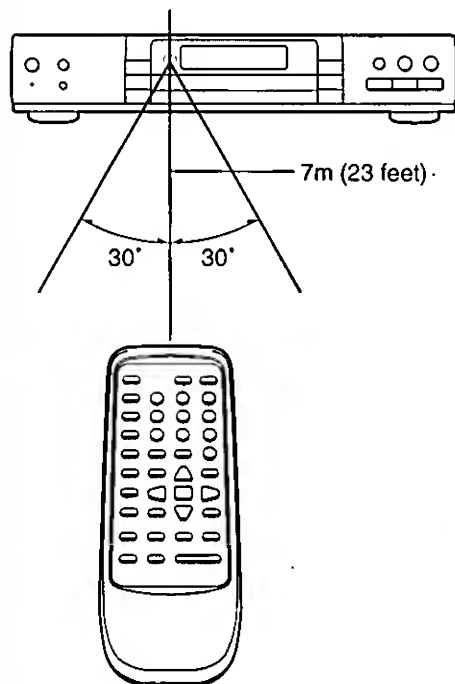
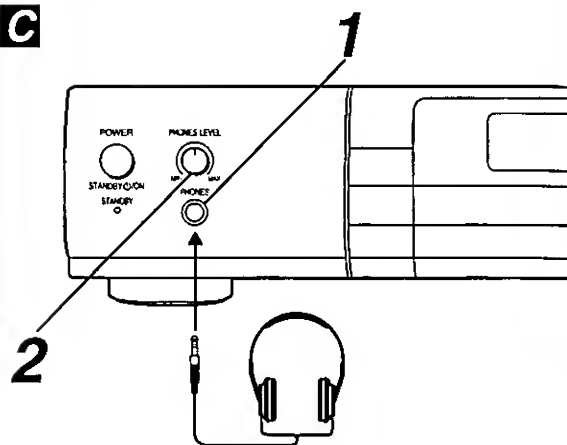
2 Adjust the volume.

Caution:

Avoid listening to sound at levels which may be harmful to your ears.

A**B**

Remote control signal sensor

**C**

Before enjoying DVD/Video CD/Audio CD
 For your convenience, the On Screen Menu Language of your DVD player has been factory pre-set to English. If you would like to change the menu language to French or Spanish, please refer to "Menu language setting" on page 40. In the explanations given below it is assumed that English has been selected as the menu language.

DVD playback

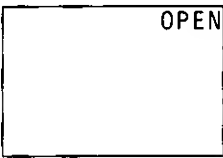
Preparations

- Switch on the TV set's power, and select "Video" as the TV input.
- Switch on the stereo system's power if the player has been connected to a stereo system.

Basic play

1 Switch on the power.

2 Press OPEN/CLOSE to open the disc tray.

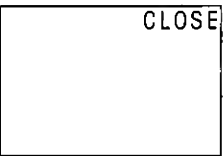


3 Place a disc onto the tray.

Hold the disc without touching either of its surfaces, position it with the printed title side facing up, align it with the guides, and place it in its proper position.

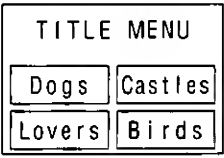
- ① 3" (8 cm) disc
- ② 5" (12 cm) disc

4 Press PLAY.



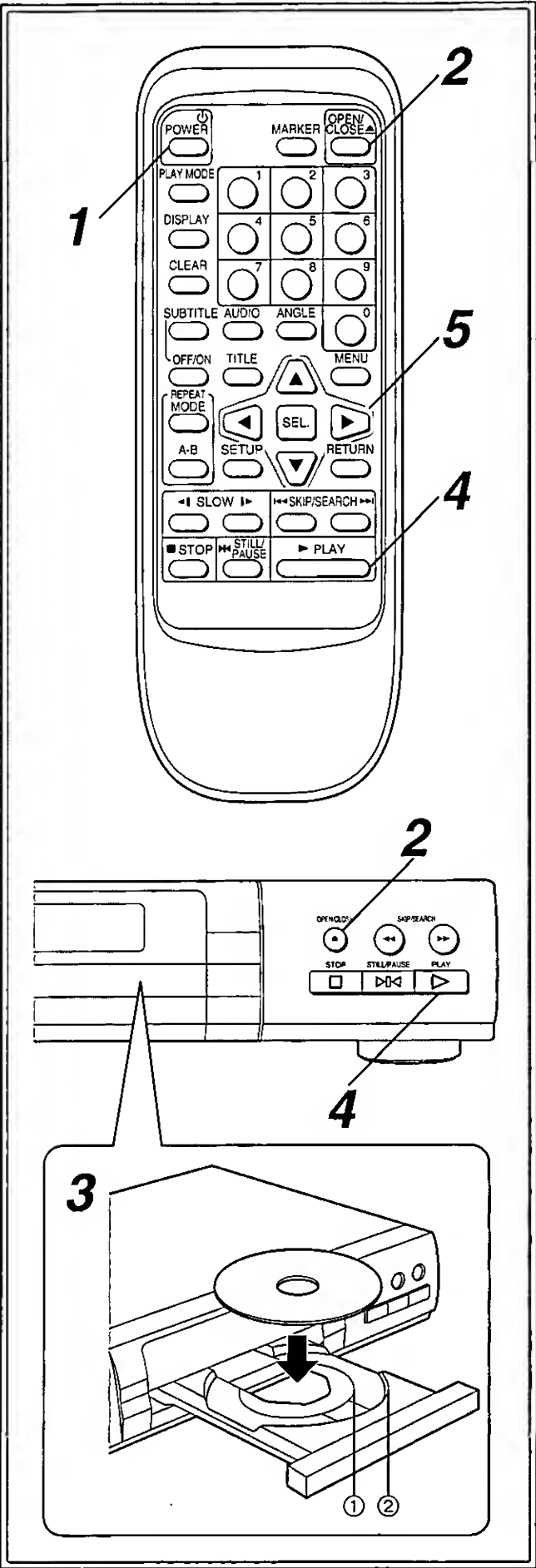
- The disc tray is automatically closed and play commences if the disc does not have any menus recorded on it.
- If the disc has one or more titles recorded on it, a menu screen will appear on the TV monitor after a few moments.

5 Press ◀/▶/▲/▼ or the number button(s) to select the preferred title.



(Example)

(Continued on the next page)



DVD playback

6 Press SEL.

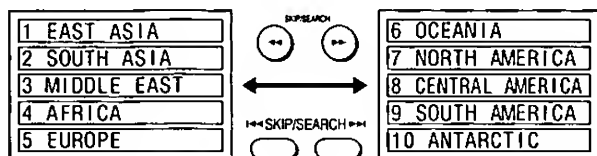
Birds

of the world

Play of the selected item now commences.

When the menu continues onto another screen

After step 4 on page 13, press SKIP/SEARCH ►►I.



- To return to the previous menu screen
Press ◀◀ SKIP/SEARCH.
- For operation, refer also to the jacket of the disc concerned.

Stopping play and returning to the menu screen

Press TITLE, MENU or RETURN.

(Which button is pressed differs depending on the disc used.)

- Play is suspended, and the menu screen is displayed.

After operation

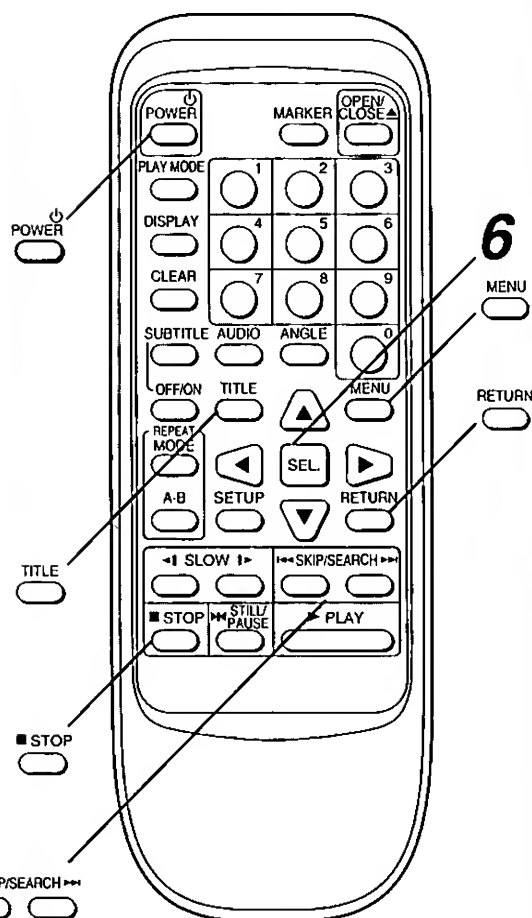
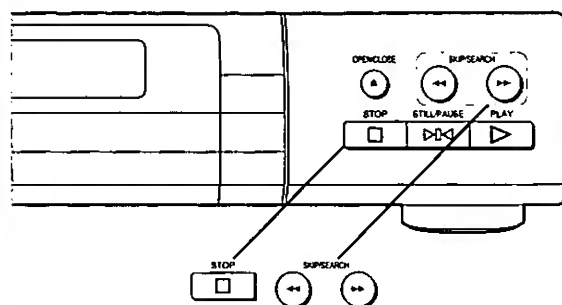
When the unit is not in use, remove the disc and press POWER to turn off the power.

Note:

- The disc continues to rotate while the menu is displayed even after the player has finished playing a particular item. When no further selections are to be played, be sure to press the STOP button to clear the menu display.
- If the disc is placed in upside down (and it is a single sided disc), the DVD display will indicate "NO DISC".

For your reference:

- When "!" appears while a button is being operated, it means that the corresponding operation is prohibited by the player.
- When "!!" appears, it means the operation is prohibited by the disc.



DVD playback

Stopping play

Press **STOP**.

For your convenience:

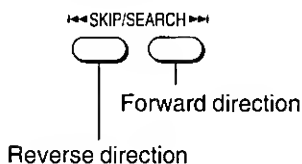
- When play is stopped, the unit records the point where **STOP** was pressed (**RESUME function**). Press **PLAY** again, and play will resume from this point. When the tray is opened or **STOP** is pressed again, the **RESUME** function will be cleared.

The **RESUME** function works only with discs for which the elapsed playing time appears on the unit's display during playback.

This feature will not be cleared when the power is turned **OFF** and then **ON**.

Rapid advance (Rapid reverse)

Hold **SKIP/SEARCH** or **SKIP/SEARCH** down during play.



- The disc is rapidly advanced (or reversed) while the button is held down.
- Normal play is resumed when the button is released.

For your reference:

- The speed of advance (or reverse) is relatively slow at first and becomes faster after about 5 seconds.

Skipping ahead or back to chapters

Skipping ahead

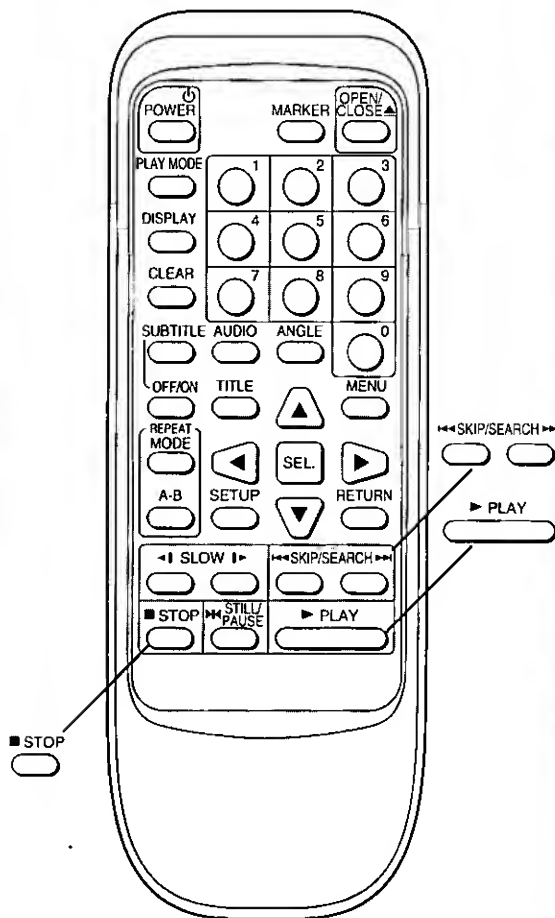
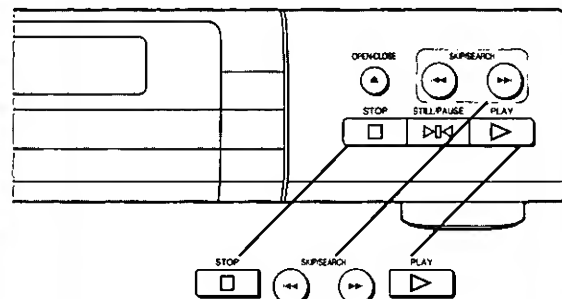
Press **SKIP/SEARCH** during play.

A chapter is skipped each time the button is pressed.

Skipping back

Press **SKIP/SEARCH** during play.

When the button is pressed once midway through a chapter, play returns to the start of that chapter. When it is pressed again, a chapter is skipped each time the button is pressed.



DVD playback

Still picture

Press **STILL/PAUSE** during play.



To return to normal play

Press **PLAY**.

Frame advance

Press **STILL/PAUSE** in the still picture mode.

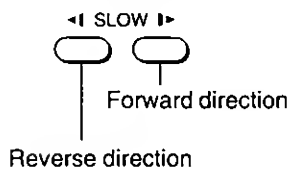
The disc is advanced by one frame each time the button is pressed.

To return to normal play

Press **PLAY**.

Slow-motion play

Press **◀ SLOW** or **SLOW ▶** in the play mode or still picture mode.



To return to the still picture mode

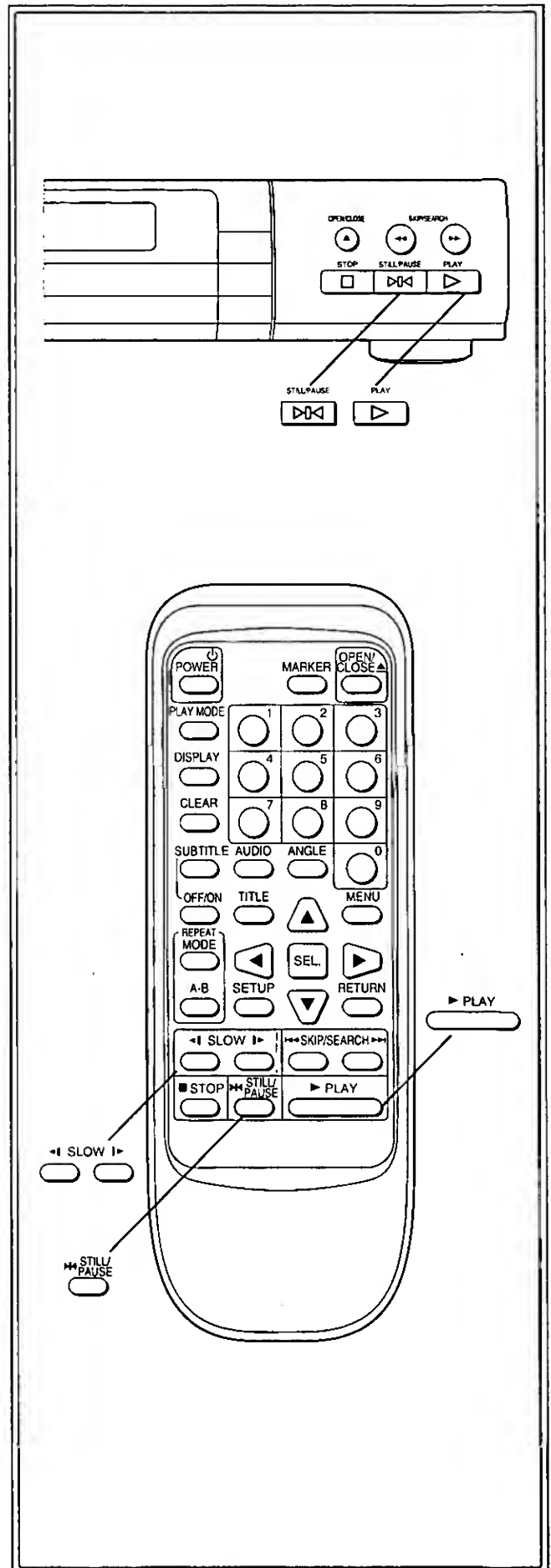
Press **STILL/PAUSE**.

To return to normal play

Press **PLAY**.

For your reference:

- When **◀ SLOW** is pressed during play, slow-motion playback in reverse direction does not provide as clear a picture as forward direction, and the image may appear to "jump".



Direct selection of scenes

Selecting scenes by title number

Example: Viewing title "2"

- 1 Press **DISPLAY** during play.

TITLE	[1]	CHAPTER	6
TIME 38:20			

- 2 Press the number button(s) to select the preferred title.

TITLE	[2]	CHAPTER	1
TIME 38:25			

- 3 Press **SEL.** or **PLAY**.

Play now commences from chapter 1 of the selected title.

Selecting a double-digit number

Example: 10

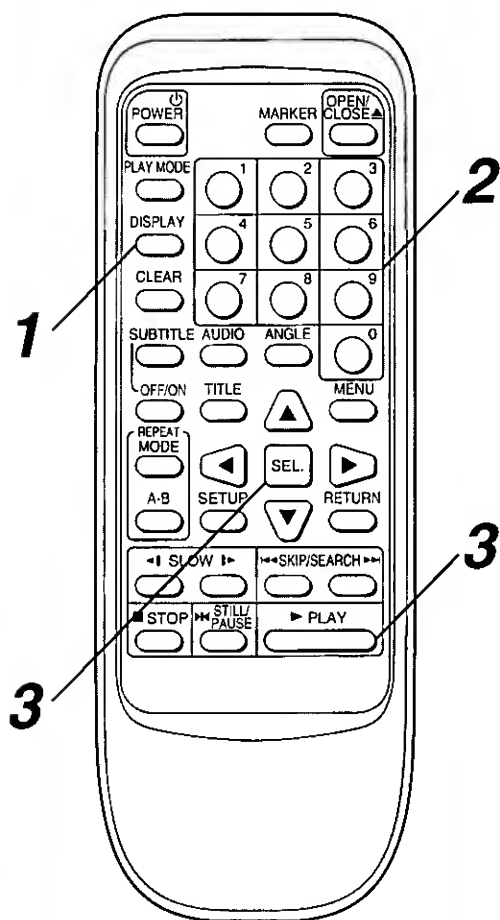
Press "1" and then "0".

Note:

- Depending on the disc used, it may not be possible to perform these operations during DVD menu play.

For your reference:

- "NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.



DVD

Direct selection of scenes

Selecting scenes by chapter number

Example: Viewing chapter "1"

- 1** Press **DISPLAY** during play.

TITLE	2	CHAPTER	6
TIME 38:20			

- 2** Press **▶** to move the cursor to the chapter number.

TITLE	2	CHAPTER	6
TIME 38:30			

- 3** Press the number button(s) to select the preferred chapter.

TITLE	2	CHAPTER	1
TIME 38:30			

- 4** Press **SEL.** or **PLAY**.

Play now commences from the selected chapter.

Selecting a double-digit number

Example: 10

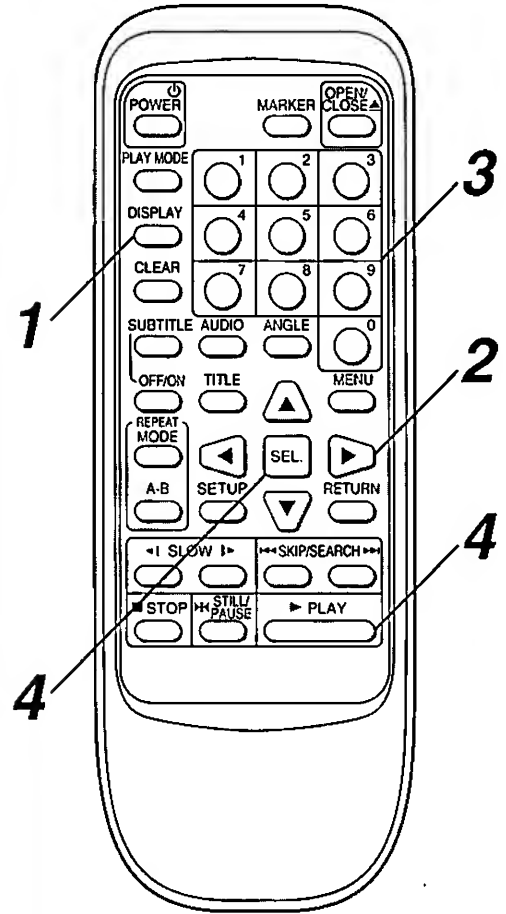
Press "1" and then "0".

Note:

- Depending on the disc used, it may not be possible to perform these operations during DVD menu play.

For your reference:

- "NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.



Direct selection of scenes

Selecting scenes by time

Example: Viewing after 60 minutes have elapsed from the title start

- 1 Press **DISPLAY** during play.

TITLE	□	CHAPTER	6
TIME 38:20			

- 2 Press **▼** to move the cursor to the time number.

TITLE	1	CHAPTER	6
TIME 38:20			

- 3 Press the number button(s) to specify the starting position.

TITLE	1	CHAPTER	6
TIME 60:00			

Example:

To specify "60 min. 00 sec.", press "6", "0", "0" and "0".

- 4 Press **SEL.** or **PLAY**.

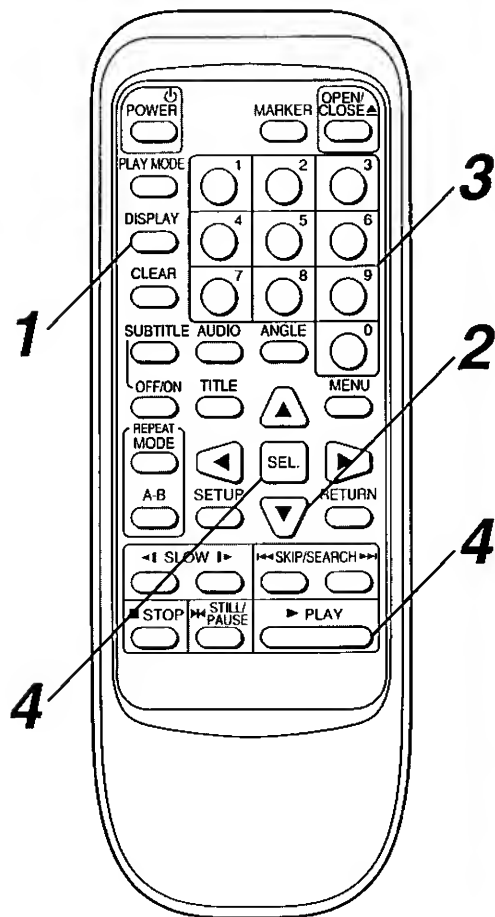
Play now commences from the specified position.

Note:

- These operations work only with discs for which the elapsed playing time appears on the unit's display during playback.
- For some discs, play may not start from the specified position even when the steps above have been performed correctly.
- Depending on the disc used, it may not be possible to perform these operations during DVD menu play.

For your reference:

- "NUMBER OUT OF RANGE" appears on the TV monitor if the selected time is invalid.



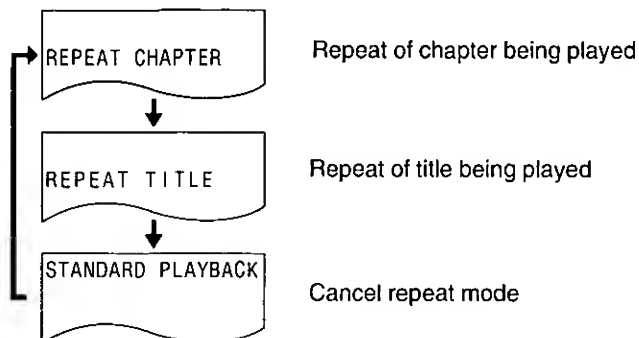
DVD

Repeat play

Repeat viewing

Press REPEAT MODE during play.

Each time this button is pressed, the TV monitor changes as shown below and the disc will repeat a chapter or title.



To return to normal play

Press REPEAT MODE several times until "STANDARD PLAYBACK" is displayed.

Note:

- Repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.
- Repeat play may not work correctly with some DVDs.

Repeating sections between two specific points (A-B repeat)

- 1 Press A-B during play at the point where repeat play is to commence (A).

A -

- 2 Press A-B again at the point where repeat play is to be concluded (B).

A-B REPEAT

Repeat play of the selection between points A and B starts.

To return to normal play

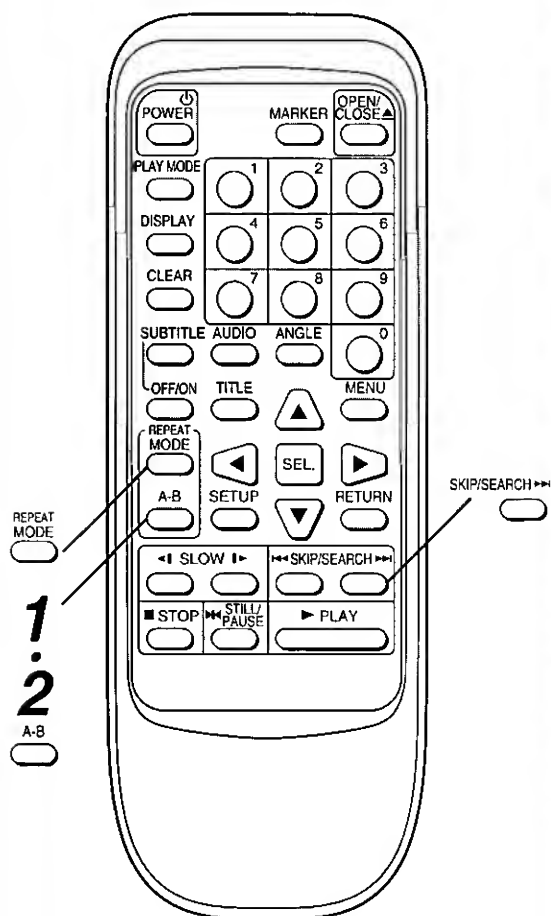
Press A-B again.
("STANDARD PLAYBACK" appears on the TV monitor.)

Note:

- A-B repeat play works only within a chapter.
- A-B repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.
- Some subtitles recorded around point A or B may fail to appear.

For your reference:

- After step 1 above, pressing SKIP/SEARCH ►► to advance the disc to point (B) is possible.



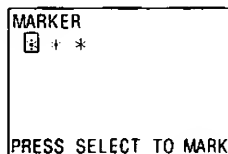
Convenient functions

Storing scenes in memory to be viewed again (Marker)

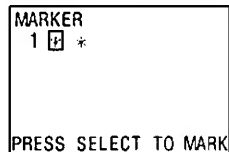
Any scenes to be viewed later can easily be stored in the memory.

Storing a scene in the memory **A**

- 1 Press **MARKER** during play.



- 2 Press **SEL.** during play at the scene to be viewed again.



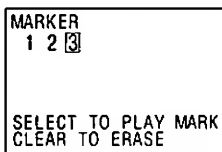
Up to 3 scenes can be stored in the memory.

- Press **MARKER** to clear the display.

Recalling a scene with a marker **B**

- 1 Press **MARKER** during play.

- 2 Press **◀/▶** to select the marker number.

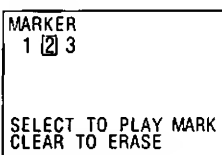


- 3 Press **SEL.**

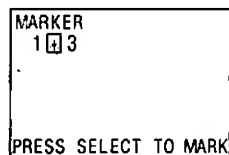
Play resumes from the scene corresponding to the selected marker.

■ Clearing the markers **B**

1. Press **MARKER** during play.
2. Press **◀/▶** to select the marker to be cleared.



3. Press **CLEAR** during play.



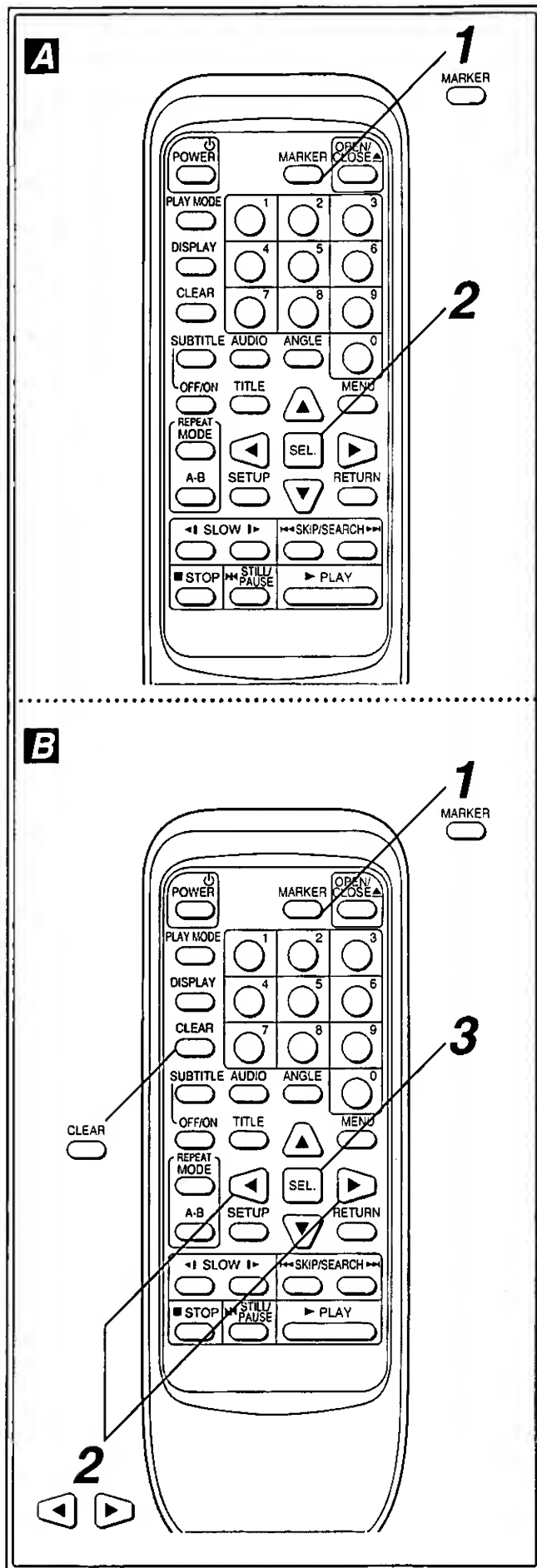
The selected marker is now cleared.

Note:

- These operations work only with discs for which the elapsed playing time appears on the unit's display during playback.
- Some subtitles recorded around the marker may fail to appear.

For your reference:

- All the markers are cleared when the power is turned off or the disc is removed.



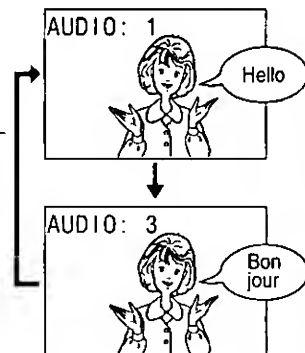
Convenient functions

Changing audio soundtrack language

It is possible to change the audio soundtrack language from the one selected at the initial settings (see page 36) to a different language, if available.

(This operation works only with discs on which multiple audio soundtrack languages are recorded.)

1 Press **AUDIO** during play.



2 Press **▲/▼** a number of times until the preferred language is selected.

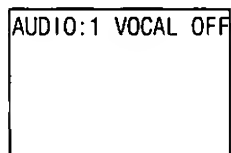
Press **AUDIO** to clear the display.

For your reference:

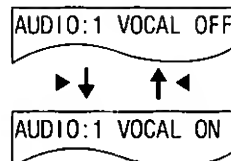
- When the preferred language is not selected, even after pressing the button several times, it means that language is not available on the disc.
- When the power is turned on or the disc is removed, the language heard is the one selected at the initial settings. If this language is not recorded on the disc, only the available language on the disc will be heard.

Switching ON/OFF the vocals for "KARAOKE" discs

1 Press **AUDIO** during play.
Present status is displayed.

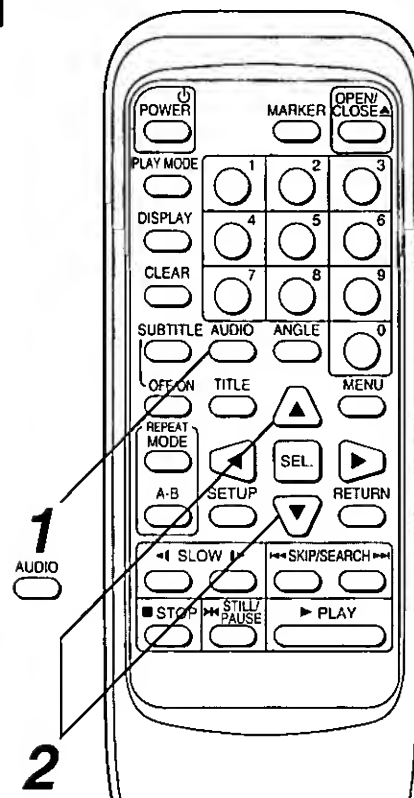


2 Press **◀/▶** to switch the vocal ON/OFF.

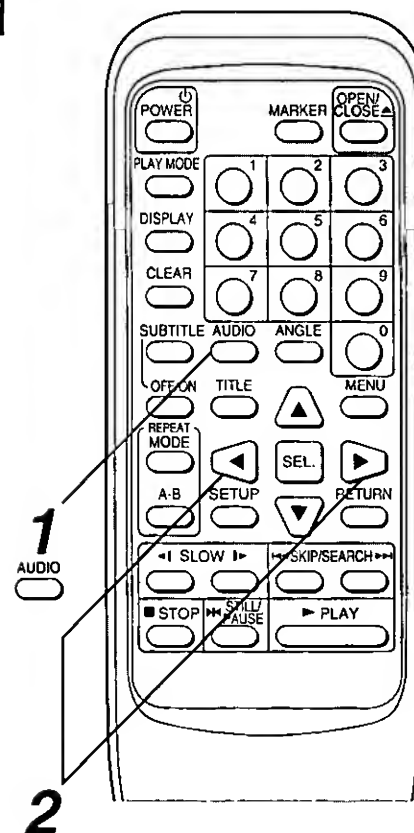


Press **AUDIO** to clear the display.

A



B

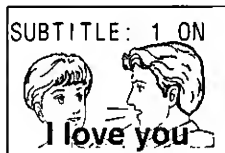


Convenient functions

Clearing/Displaying of subtitles

If a disc has subtitles recorded on it, they can either be cleared or displayed on the TV monitor.
(This operation works only with discs on which the subtitle language is recorded.)

Press SUBTITLE OFF/ON during play.



When this button is pressed once, the subtitles are cleared; when pressed again, they are displayed.

Changing subtitle language

It is possible to change the subtitle language from the one selected at the initial settings (see page 37) to a different language, if available.

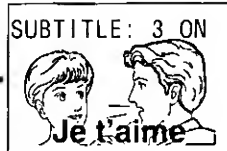
(This operation works only with discs on which multiple subtitle languages are recorded.)

1 Press SUBTITLE during play.

When no subtitles are recorded "※※" will be displayed instead of the language number.



2 Press ▲/▼ a number of times until the preferred language is selected.



Press SUBTITLE to clear the display.

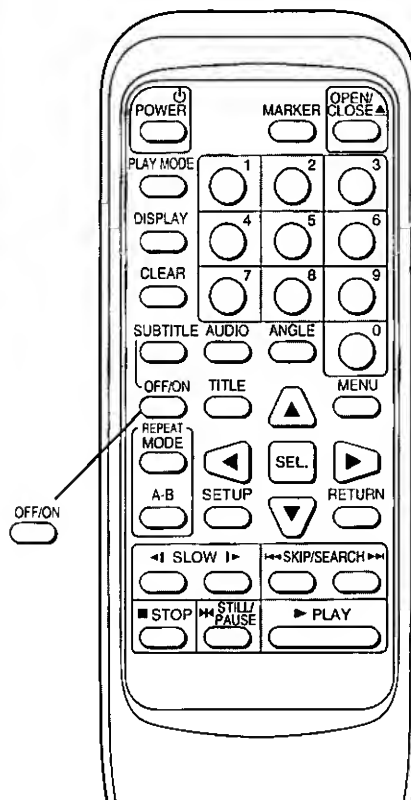
Note:

- In some cases, the subtitle language is not changed immediately to the selected one.

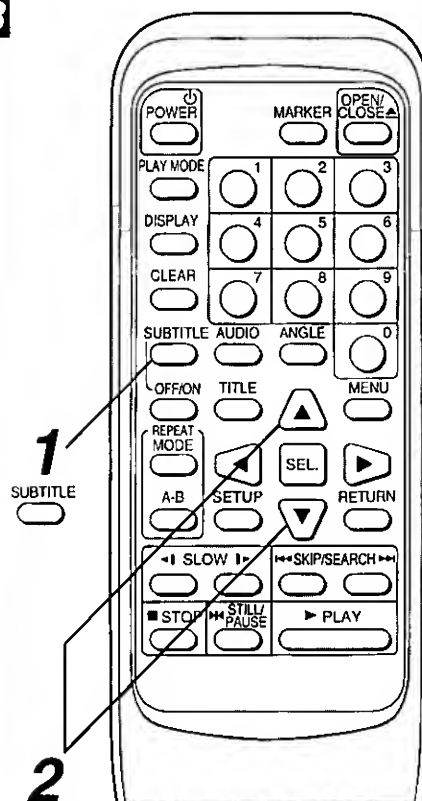
For your reference:

- When the preferred language is not selected, even after pressing the button several times, it means that the language is not available on the disc.
- When the power is turned on or the disc is removed, subtitles appear in the language selected at the initial settings. If this language is not recorded on the disc, they appear in the disc's priority language.

A



B



DVD

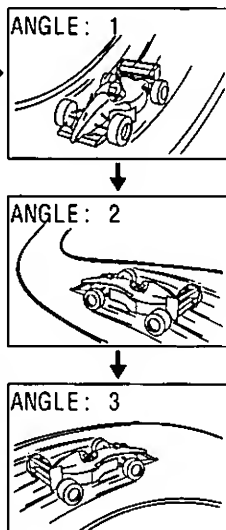
Convenient functions

Viewing from another angle **A**

Some DVD discs may contain scenes which have been shot simultaneously from a number of different angles. For these discs, the same scene can be viewed from each of these different angles using the ANGLE button. (The recorded angles differ depending on the disc used.)

1 Press **ANGLE** during play.

2 Press **▲/▼** a number of times until the preferred angle is selected.



Press **ANGLE** to clear the display.

Note:

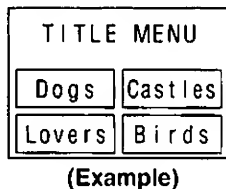
- This function will only work on discs where different angles have been recorded.
(“ANGLE” is shown on the unit’s display.)

Selection of titles **B**

Some discs with movies, for example, may be available with two or more titles. If the disc has a title menu recorded on it, the **TITLE** button can be used to select the movie title. (The details of operation differ depending on the disc used.)

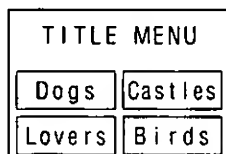
1 Press **TITLE** during play.

A list of the titles on the disc is now displayed.



- Pressing **TITLE** again resumes play from the scene when **TITLE** was first pressed.

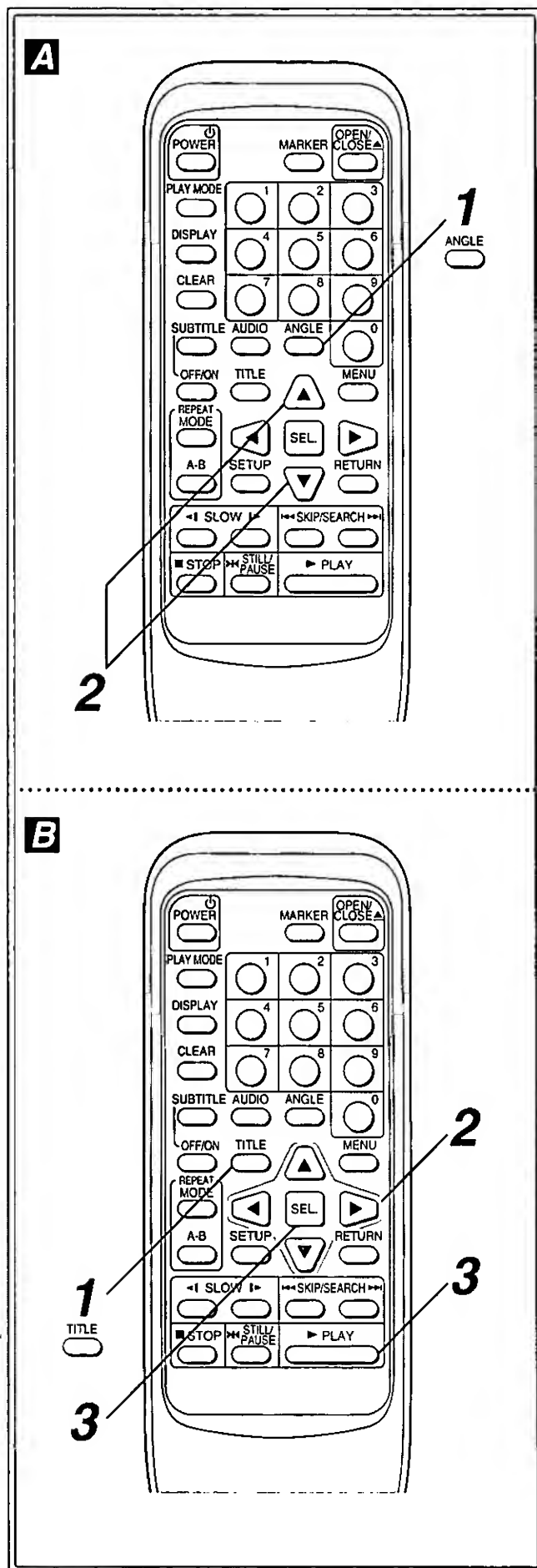
2 Press **◀/▶/▲/▼** to select the preferred title.



3 Press **SEL.** or **PLAY.**



The selected title now starts playing.



Convenient functions

Using a DVD menu

Some DVD discs have unique menu structures called DVD menus. For example, DVDs programmed with complex contents provide guide menus, and those recorded with various languages provide menus for audio and subtitle language. Although the DVD menu's contents and operation differ from disc to disc, the following explains basic operation when this feature is used.

1 Press MENU during play.

DVD MENU
1. SUBTITLE
2. AUDIO
3. ANGLE

(Example)

The DVD menu entered on the disc is now displayed.

- Pressing MENU again resumes play from the scene when MENU was first pressed.

2 Press ◀/▶/▲/▼ to select the preferred item.

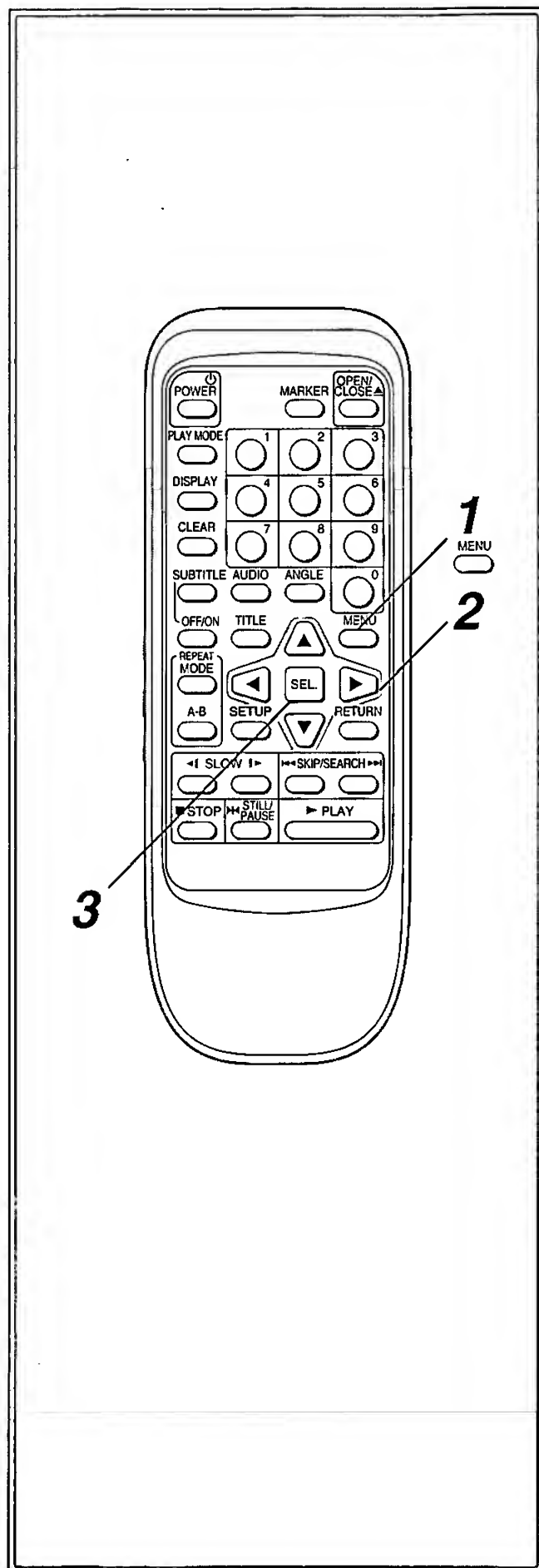
DVD MENU
1. SUBTITLE
2. AUDIO
3. ANGLE

3 Press SEL.

The selected item is now executed.

When the menu continues onto another screen

Repeat steps 2 and 3.



DVD

Video CD and Audio CD playback

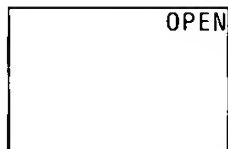
Preparations

- Switch on the TV set's power, and select "Video" as the TV input.
- Switch on the stereo system's power if the player has been connected to a stereo system.

Basic play

1 Switch on the power.

2 Press OPEN/CLOSE to open the disc tray.

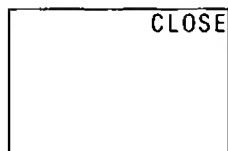


3 Place a disc onto the tray.

Hold the disc without touching either of its surfaces, position it with the printed title side facing up, align it with the guides, and place it in its proper position.

- ① 3" (8 cm) disc
- ② 5" (12 cm) disc

4 Press PLAY.



For audio CDs and for video CDs without playback control (see page 27):

Play is commenced.

For video CDs provided with playback control:

A menu appears after a few moments.

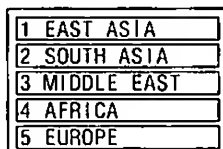
Menu play [Video CDs]

- This function works only with video CDs with playback control (version 2.0).
- The details differ depending on the disc concerned. Also refer to the instructions accompanying the disc.

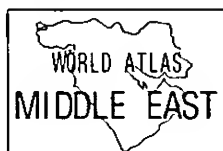
After steps 1 to 4 above the menus are displayed on the TV monitor:

Example:

Viewing "MIDDLE EAST" on a WORLD ATLAS disc

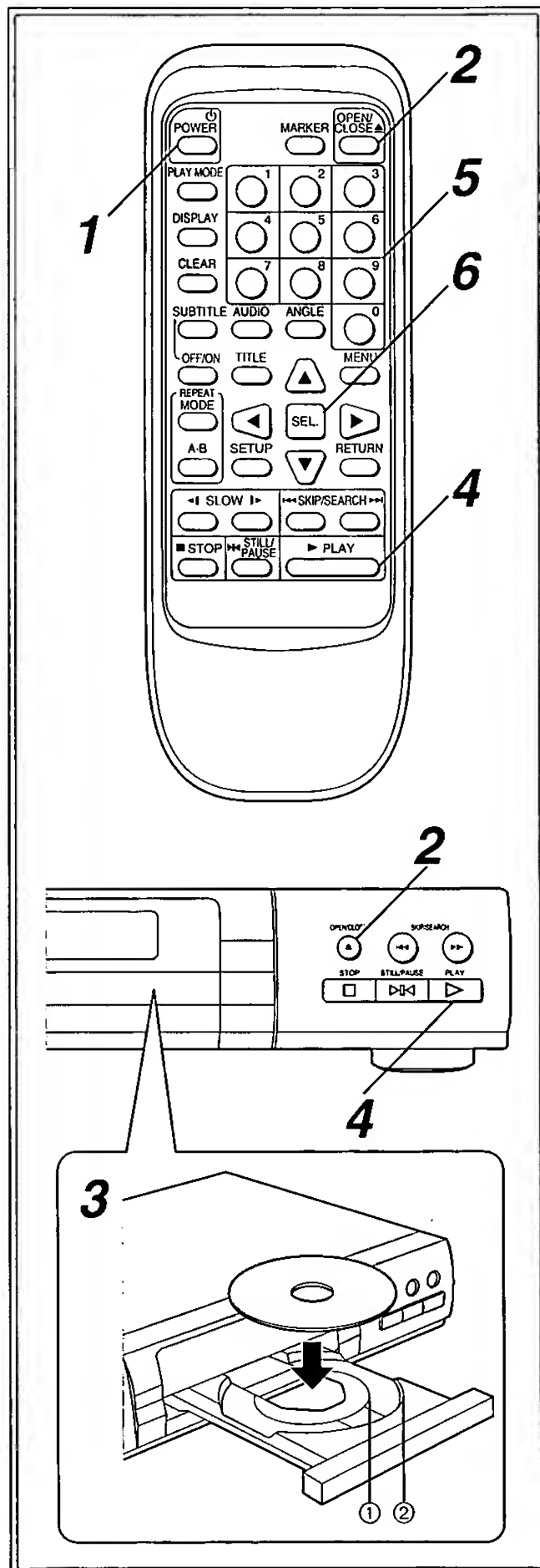


5 Press the number button(s) to select the preferred item.



6 Press SEL.

The player now starts to play the selected item.



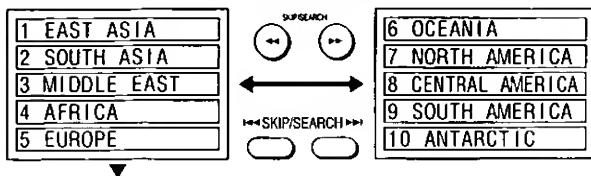
Video CD and Audio CD playback

Note:

◀▶/▲/▼ are not effective for selecting items for video CDs.

When the menu continues onto another screen

After step 4 on page 26, press SKIP/SEARCH ▶▶.



- To return to the previous menu screen
Press ◀◀ SKIP/SEARCH.
- For operation, refer also to the jacket of the disc concerned.

Stopping play and returning to the menu screen

Press RETURN.

- Play is suspended, and the menu screen is displayed.

After operation

When the unit is not in use, remove the disc and press POWER to turn off the power.

Note:

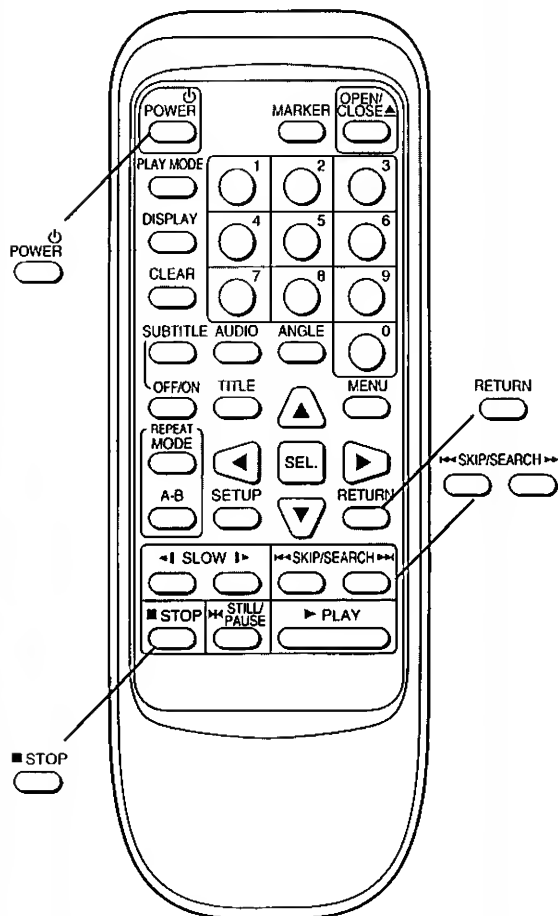
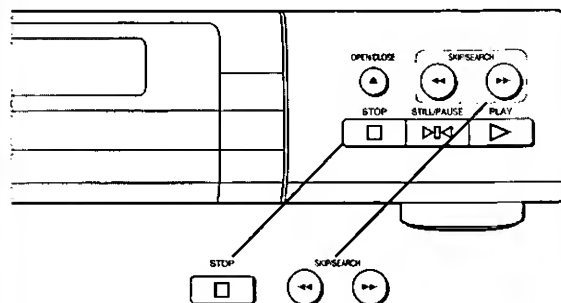
- The disc continues to rotate while the menu is displayed even after the player has finished playing a particular item. When no further selections are to be played, be sure to press the STOP button to clear the menu display.
- If the disc is placed in upside down (and it is a single sided disc), the DVD display will indicate "NO DISC".

For your reference:

- When "!" appears while a button is being operated, it means that the corresponding operation is prohibited by the player.
When "!!" appears, it means the operation is prohibited by the disc.

What is playback control?

If a video CD has "playback control" written on its disc or jacket, it means that particular scenes or information can be selected for viewing interactively with the TV monitor using the menu screen.



Video CD and Audio CD playback

Stopping play

Press **STOP**.

For your convenience:

- When play is stopped, the unit records the point where **STOP** was pressed (**RESUME** function). Press **PLAY** again, and play will resume from this point. When the tray is opened or **STOP** is pressed again, the **RESUME** function will be cleared.

The **RESUME** function works only with discs for which the elapsed playing time appears on the unit's display during playback.

This feature will not be cleared when the power is turned **OFF** and then **ON**.

Rapid advance (Rapid reverse)

Hold **⏮ SKIP/SEARCH** or **SKIP/SEARCH ⏭** down during play.

⏮ SKIP/SEARCH ⏭



Forward direction

Reverse direction

- The disc is rapidly advanced (or reversed) while the button is held down.
- Normal play is resumed when the button is released.

For your reference:

- The speed of advance (or reverse) is relatively slow at first and becomes faster after about 5 seconds.
- When **⏮ SKIP/SEARCH ⏭** is pressed during menu play of video CDs, a menu screen may sometimes be recalled.

Skipping ahead or back to tracks

Skipping ahead

Press **SKIP/SEARCH ⏭** during play.

A track is skipped each time the button is pressed.

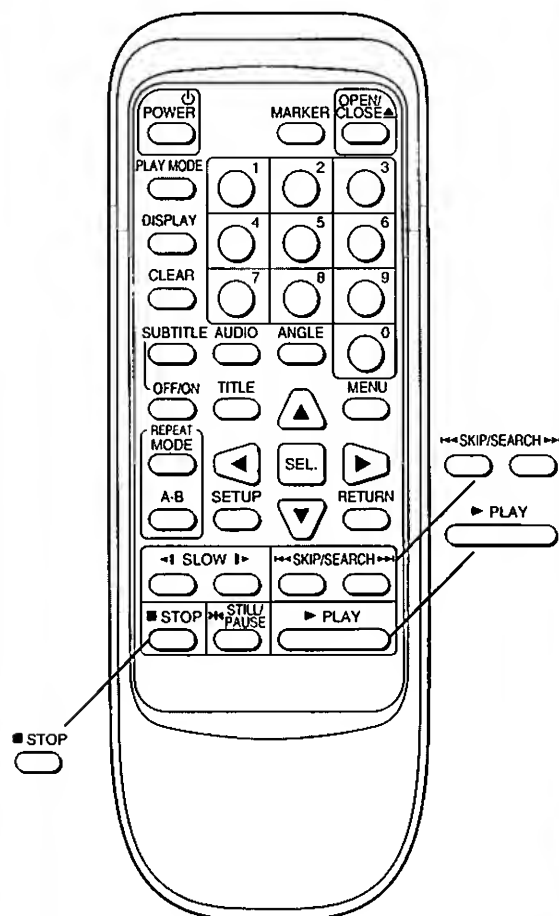
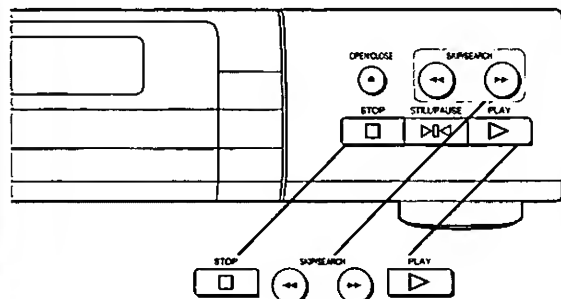
Skipping back

Press **⏮ SKIP/SEARCH** during play.

When the button is pressed once midway through a track, play returns to the start of that track. When it is pressed again, a track is skipped each time the button is pressed.

For your reference:

- When **⏮ SKIP/SEARCH ⏭** is pressed during menu play of video CDs, a menu screen may sometimes be recalled.



Video CD and Audio CD playback

Still picture (Pause)

Press STILL/PAUSE during play.

Video CD:

The player will be placed in the still picture mode.

Audio CD:

The player will be placed in the pause mode.

To return to normal play

Press PLAY.

Frame advance [Video CDs]

Press STILL/PAUSE in the still picture mode.

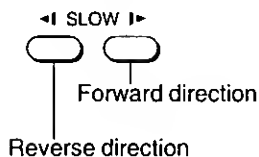
The disc is advanced by one frame each time the button is pressed.

To return to normal play

Press PLAY.

Slow-motion play [Video CDs]

Press ◀ SLOW or SLOW ▶ in the play mode or still picture mode.



To return to the still picture mode

Press STILL/PAUSE.

To return to normal play

Press PLAY.

For your reference:

- Slow-motion playback in reverse direction is not possible.

Enjoying video CDs with playback control without using menus [Video CDs]

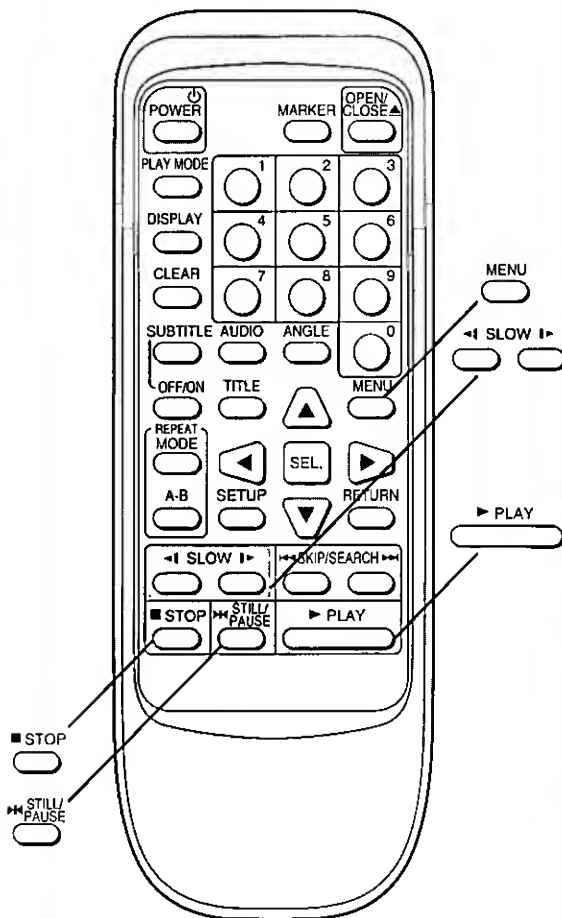
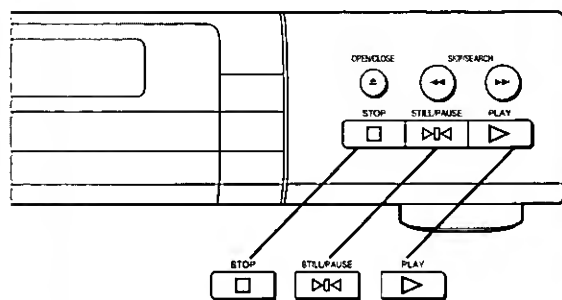
- 1 Press STOP after the menu screen appears (after step 4 on page 26).
("PBC" will be cleared from the unit's display.)
- 2 Press the number button(s) to select the preferred track.
- 3 Press PLAY.
(Play is commenced.)

To return to menu play

Press STOP to stop playback and press MENU.

("PBC" will light up on the unit's display and the menu screen is resumed.)

Perform steps 5 and 6 on page 26.



Direct selection of scenes

Selecting by track number

Example: Viewing (listening to) track "3"

- 1** Press **DISPLAY** during play.

TRACK	<input type="text" value="1"/>
TIME	3:20

- 2** Press the number button(s) to select the preferred track.

TRACK	<input type="text" value="3"/>
TIME	3:20

- 3** Press **SEL.** or **PLAY**.

Play now commences from the selected track.

Selecting a double-digit number

Example: 10

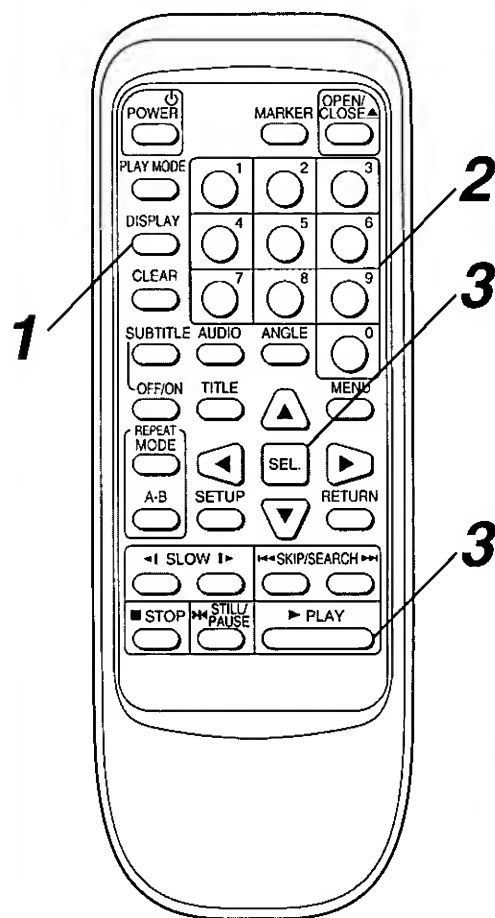
Press "1" and then "0".

Note:

- These operations do not work during menu play of video CDs.

For your reference:

- "NUMBER OUT OF RANGE" appears on the TV monitor if the number selected does not exist on the disc.

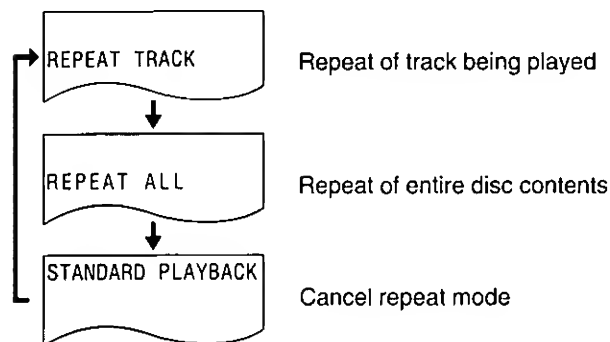


Repeat play

Repeat viewing (listening)

Press REPEAT MODE during play.

Each time this button is pressed, the TV monitor changes as shown below and the disc will repeat a track or the entire disc content.



To return to normal play

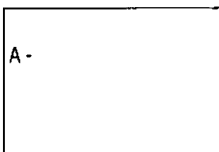
Press REPEAT MODE several times until "STANDARD PLAYBACK" is displayed.

Note:

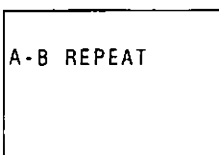
- Repeat play works only with discs for which the elapsed playing time appears on the unit's display during playback.

Repeating sections between two specific points (A-B repeat)

- 1 Press A-B during play at the point where repeat play is to commence (A).



- 2 Press A-B again at the point where repeat play is to be concluded (B).



Repeat play of the selection between points A and B starts.

To return to normal play

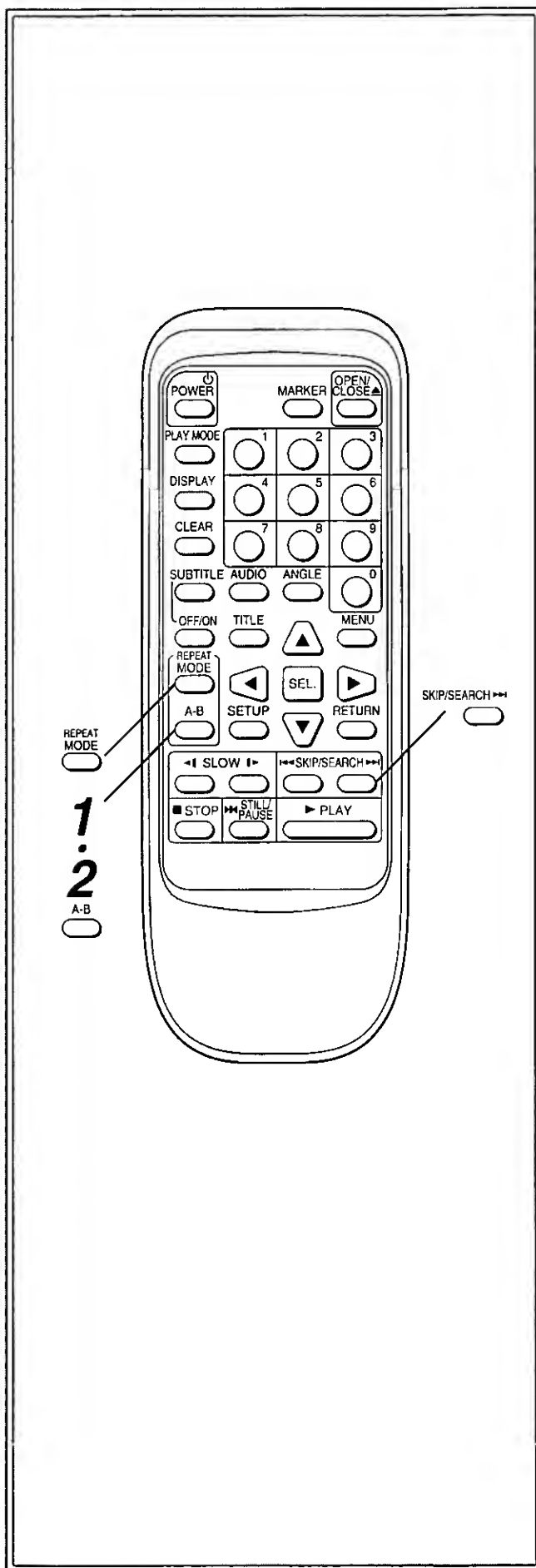
Press A-B again.
("STANDARD PLAYBACK" appears on the TV monitor.)

Note:

- A-B repeat play works only within a track.

For your reference:

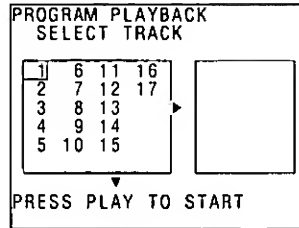
- After step 1 above, pressing SKIP/SEARCH ►► to advance the disc to point (B) is possible.



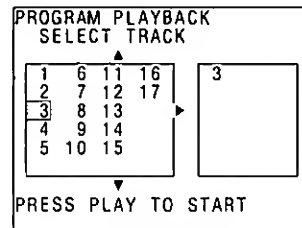
Program play

Example: Playing tracks "3", "1" and "4" in this order

- 1 Press **PLAY MODE** in the stop mode.



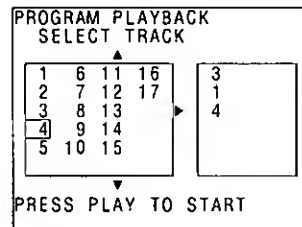
- 2 Press **◀/▶/▲/▼** to select the preferred track and press **SEL.**



“▼” or “▶” mark means that more tracks exist beyond the mark. They will appear one at a time when ▼ or ▶ is pressed.

- Press **CLEAR** to cancel a selected track.

- 3 Repeat step 2 to select another track.



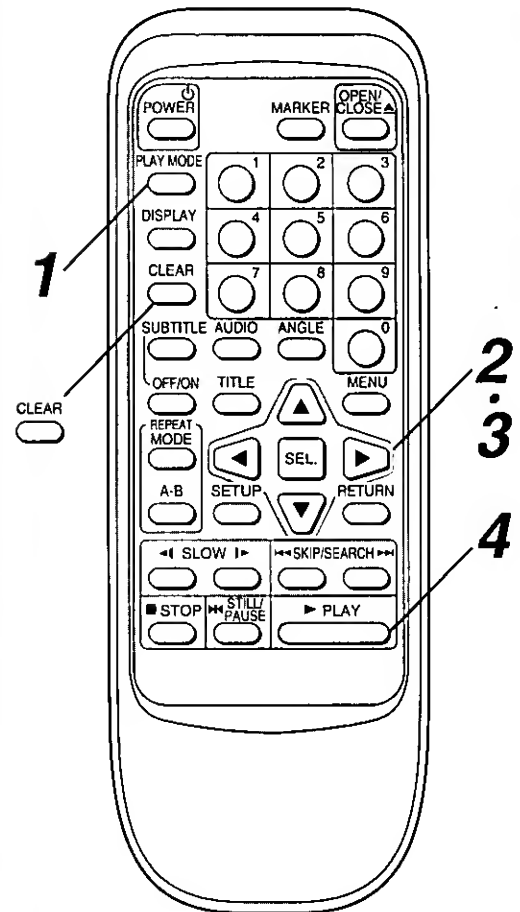
Up to 18 tracks can be programmed.

- 4 Press **PLAY.**

Play is now commenced in the programmed sequence.

After playback

Play is stopped and the program playback screen is displayed.



Program play

Returning to normal play **A**

1. Press STOP. (Program play is suspended.)
2. Press PLAY MODE.
("STANDARD PLAYBACK" is displayed.)
3. Press PLAY.
Normal play is commenced.
(The content of the program is still retained in the memory.)

Clearing the program one by one **A**

1. Press STOP twice.
(Program playback screen is displayed.)
2. Press CLEAR.
The last program will be cleared each time CLEAR is pressed.

Clearing all the programs

The programs are cleared when the power is turned off or the disc is removed.

Switching ON/OFF the vocals for "KARAOKE" discs [Video CDs] **B**

- 1 Press AUDIO during play.

Present status is displayed.

AUDIO: STEREO

- 2 Press ▲/▼ to select the preferred channel.

AUDIO: STEREO

▼↓ ▲↑

AUDIO: R

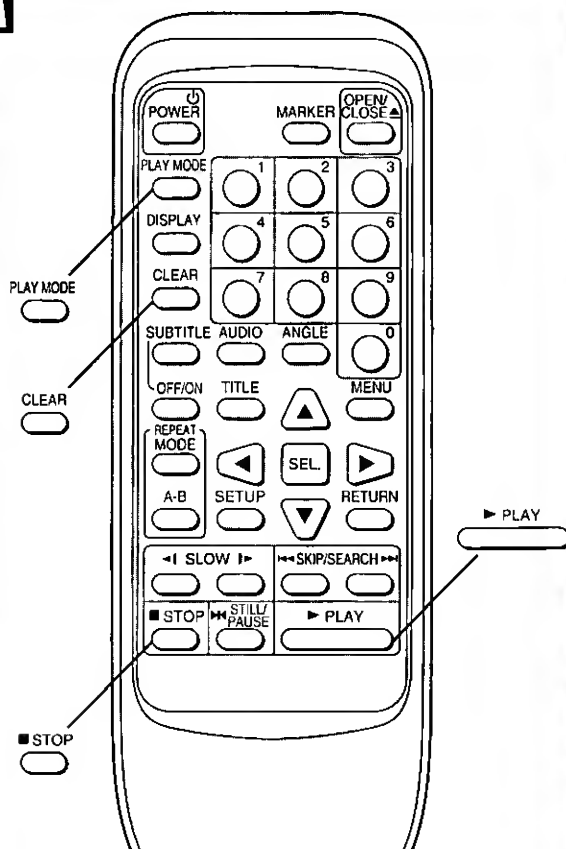
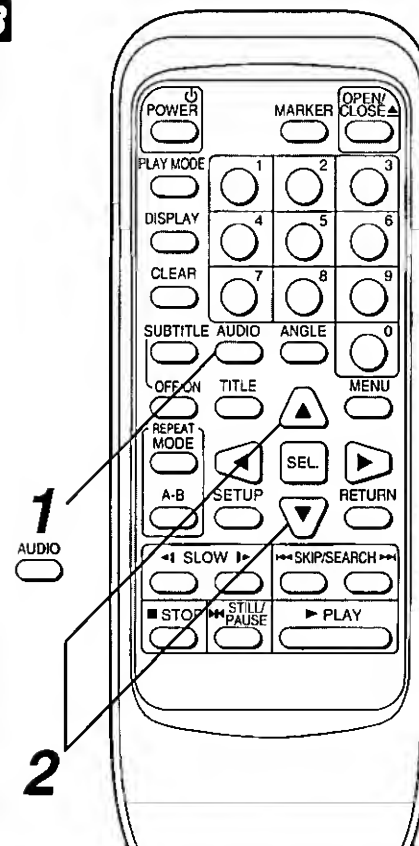
▼↓ ▲↑

AUDIO: L

Press AUDIO to clear the display.

Note:

- This operation does not work with audio CDs.

A**B**

Initial settings

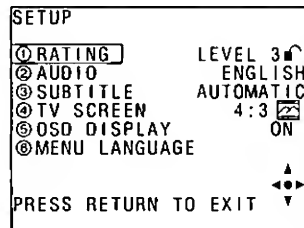
Once the setup has been completed, the player can always be operated under the same conditions (especially with DVD discs).

The settings will be retained in the memory, even after turning the power OFF, until the settings are changed.

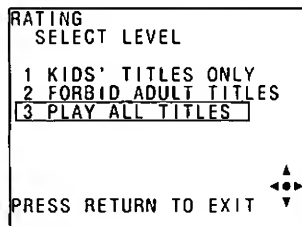
Rating level setting [DVD]

This is to disable the playing of specified discs which are unsuitable for children.

- 1** Press **SETUP** in the stop mode.



- 2** Press **▲/▼** or **"1"** to select **"RATING"** and press **SEL**.



1 KIDS' TITLES ONLY

Only DVD software for kids can be played.

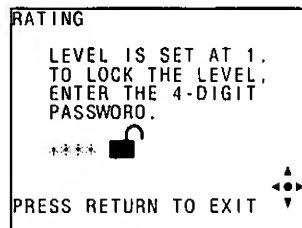
2 FORBID ADULT TITLES

DVD software for adults cannot be played.

3 PLAY ALL TITLES (factory setting)

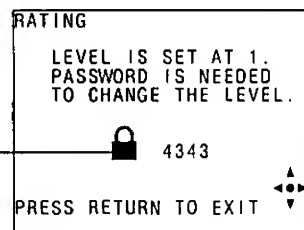
All DVD software can be played.

- 3** Press **▲/▼** to select the preferred level and press **SEL**.



- 4** Input a 4-digit password and press **SEL**.

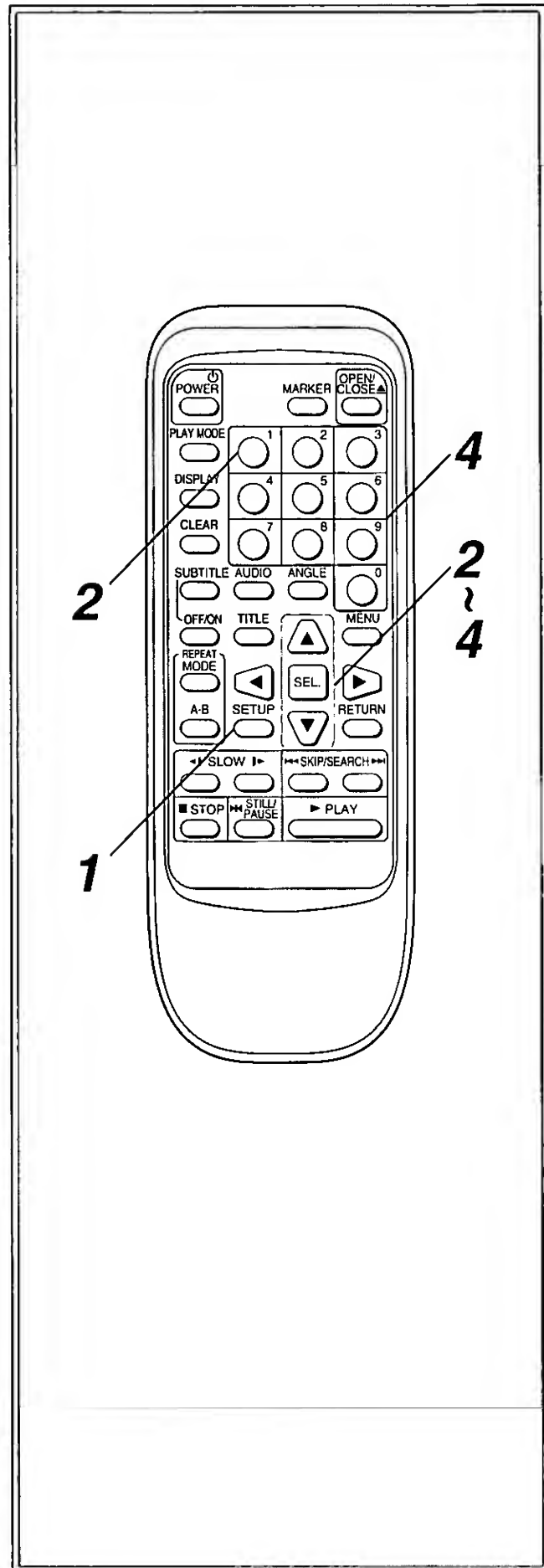
The lock symbol appears closed to show the rating is locked.



Example: "4343"

Do not forget your password.

(Continued on the next page)



Initial settings

5 Press RETURN.

Setting is finished and the "SETUP" screen is displayed.

- The rating is locked and this setting cannot be changed unless the correct password is entered.

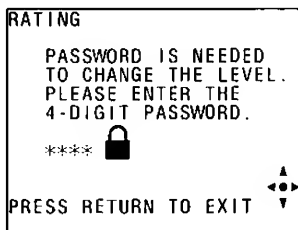
If you do not want to lock the setting with a password

Press RETURN after step 3 on page 34.

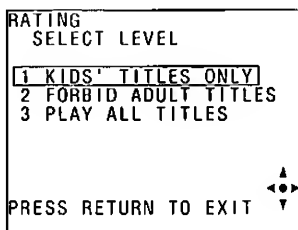
Setting is finished and the "SETUP" screen is displayed.

To release the lock

1. Perform steps 1~2 on page 34.



2. Input the 4-digit password which was registered and press SEL.



To return the TV monitor to the "SETUP" screen

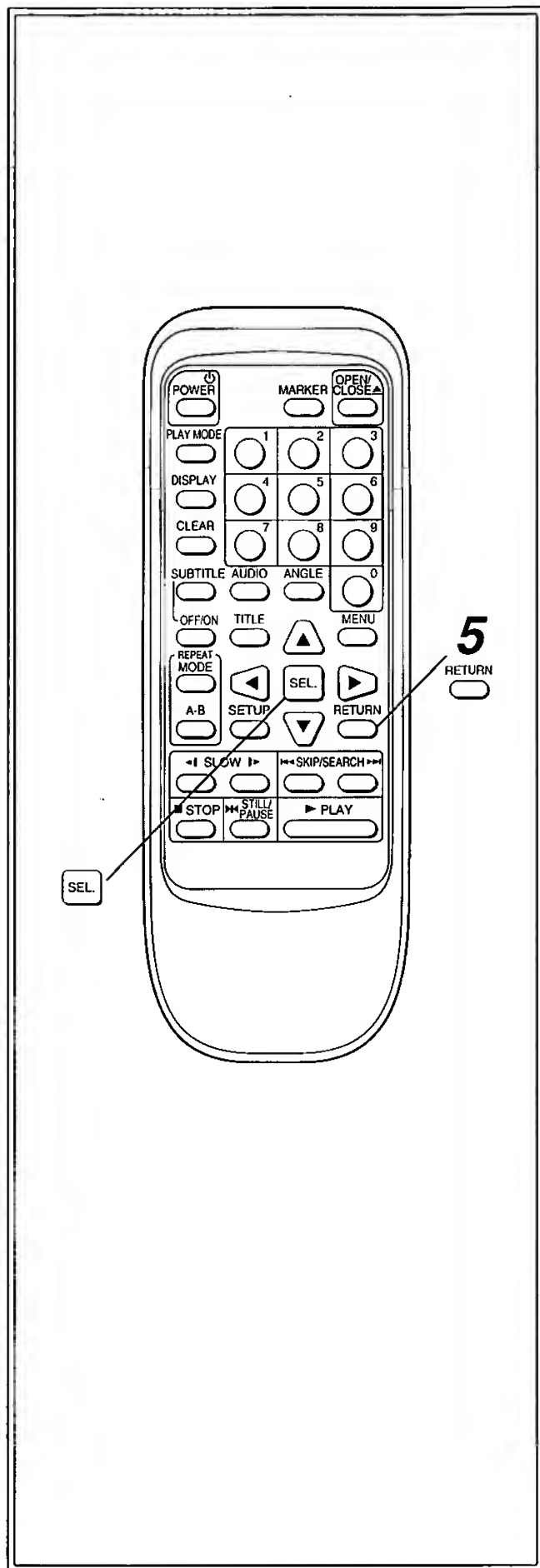
Press RETURN.

To finish the setup operation

Press RETURN when the "SETUP" screen is displayed.

Note:

- Some discs may not be encoded with specific rating level information though its disc jacket says that it is for "adults". For those discs, the age restriction will not work.

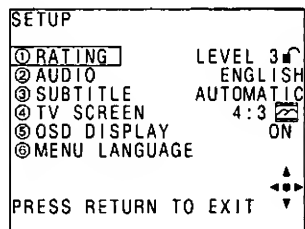


Initial settings

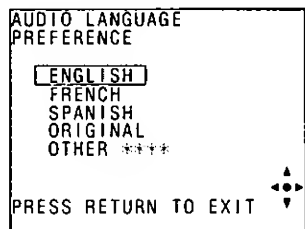
Audio soundtrack language selection [DVD]

Programs can always be played in the same audio soundtrack language even after replacing discs or turning the power off and on.

- 1 Press **SETUP** in the stop mode.



- 2 Press **▲/▼** or **"2"** to select **"AUDIO"** and press **SEL.**



ORIGINAL:

The top-priority language of each disc will be selected.

OTHER ****:

Another language can be selected.

(Refer to the language codes on page 41. Press **CLEAR** if an incorrect language code is entered.)

- 3 Press **▲/▼** to select the preferred language and press **SEL.**

Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

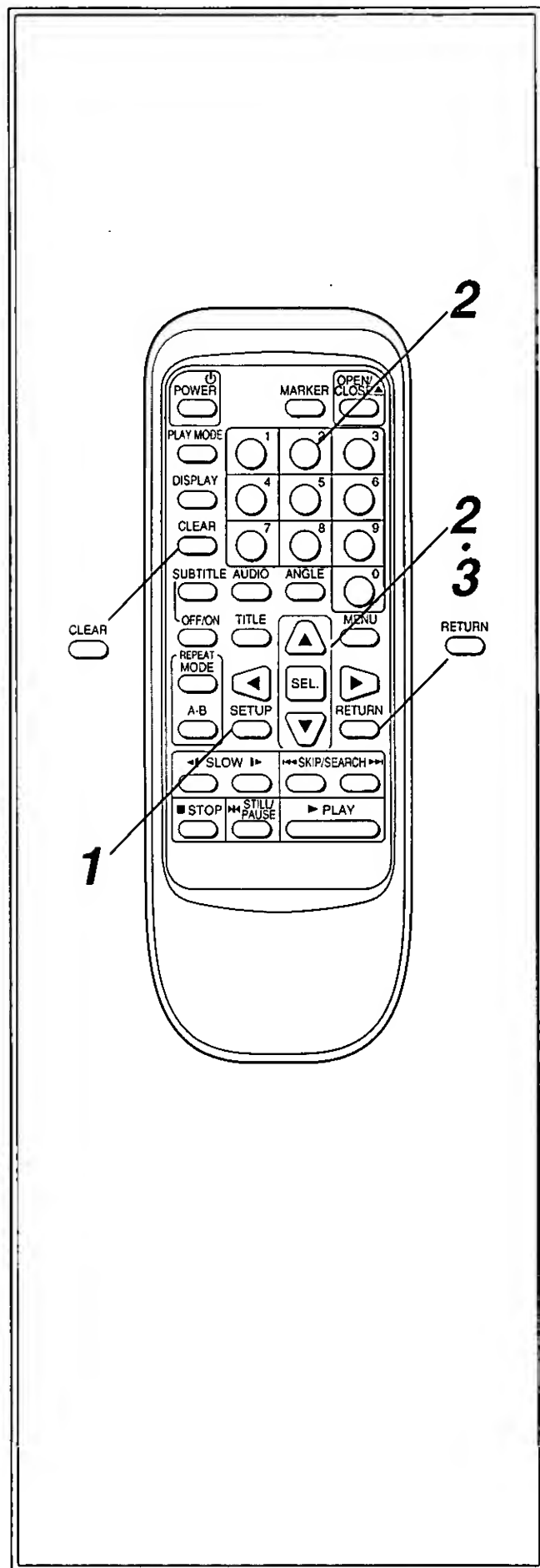
Press **RETURN**.

To finish the setup operation

Press **RETURN** when the "SETUP" screen is displayed.

For your reference:

- If the language selected is not available on the disc, the soundtrack will be heard in the top-priority language on the disc.

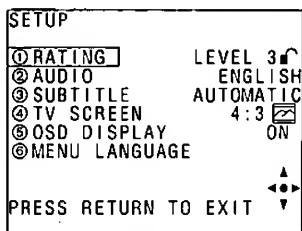


Initial settings

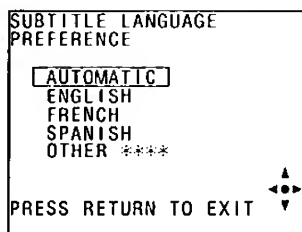
Subtitle language selection [DVD]

Programs can always be played in the same subtitle language even after replacing discs or turning the power off and on.

- 1 Press **SETUP** in the stop mode.



- 2 Press **▲/▼** or **"3"** to select **"SUBTITLE"** and press **SEL.**



AUTOMATIC:

The same language selected at the setup "AUDIO" will be selected. (factory setting)

- If the language selected for the "AUDIO" is actually used during playback, the subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at the setup "AUDIO".

OTHER ****:

Another language can be selected.

(Refer to the language codes on page 41. Press **CLEAR** if an incorrect language code is entered.)

- 3 Press **▲/▼** to select the preferred language and press **SEL.**

Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

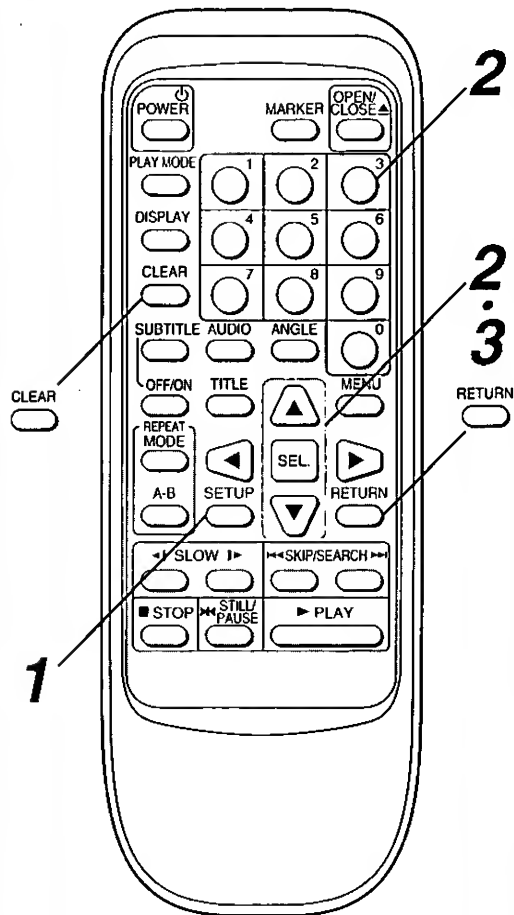
Press **RETURN**.

To finish the setup operation

Press **RETURN** when the "SETUP" screen is displayed.

For your reference:

- If the subtitle language selected is not available on the disc, the top-priority language on the disc will be used.

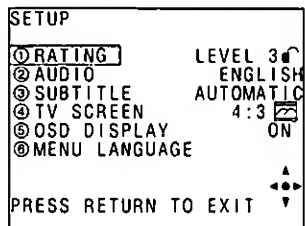


Initial settings

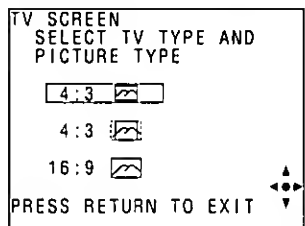
TV screen setting

The type of TV set (4:3 or 16:9) connected to the player and the wide-screen picture type for a 4:3 TV set can be set.

1 Press **SETUP** in the stop mode.



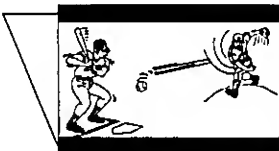
2 Press **▲/▼** or "**4**" to select "**TV SCREEN**" and press **SEL**.



4:3 (factory setting)

Select this for a conventional size TV set.

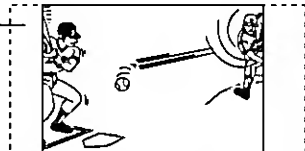
Black bands appear at top and bottom of screen (letter-box style).



4:3

Select this for a conventional size TV set.

Video material formatted in the pan & scan style is played in that style (the left and right edges are cut off).

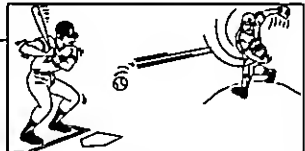


- Video material not formatted in the pan & scan style is played in the letter-box style.

16:9

Select this for a wide-screen TV set.

Played in "FULL" size.



- Setting the wide-screen TV to "FULL" mode is also necessary.

※ Each screen shows an example when the video material for a wide-screen is played.

3 Press **▲/▼** to select the screen type and press **SEL**.

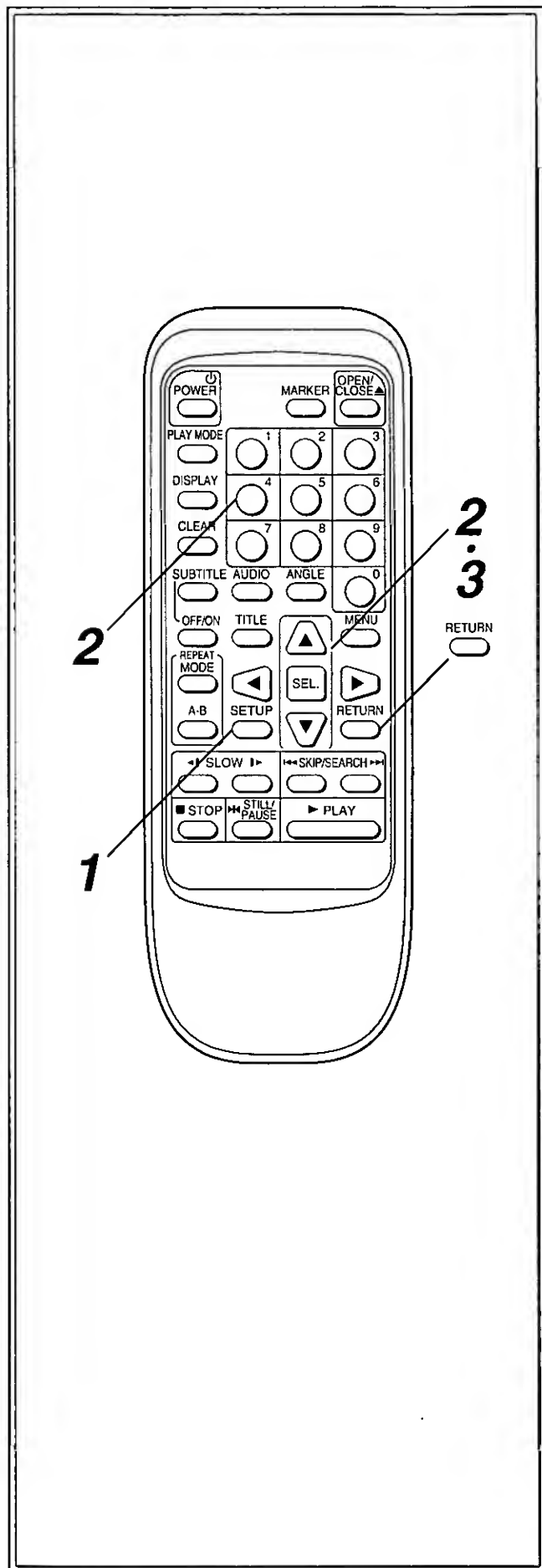
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

Press **RETURN**.

To finish the setup operation

Press **RETURN** when the "SETUP" screen is displayed.

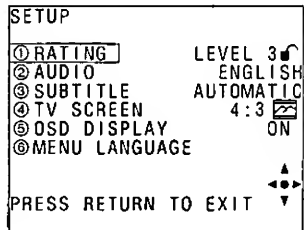


Initial settings

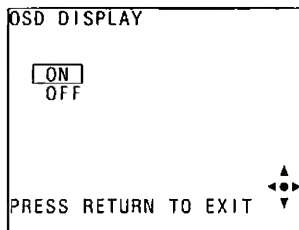
On screen display messages setting

You can select whether on screen display messages will be displayed or not when the buttons are operated.

- 1 Press **SETUP** in the stop mode.



- 2 Press **▲/▼** or **"5"** to select **"OSD DISPLAY"** and press **SEL**.



ON: Screen messages are displayed when the buttons are operated. (factory setting)
OFF: Screen messages are not displayed.

- 3 Press **▲/▼** to select **"ON"** or **"OFF"** and press **SEL**.

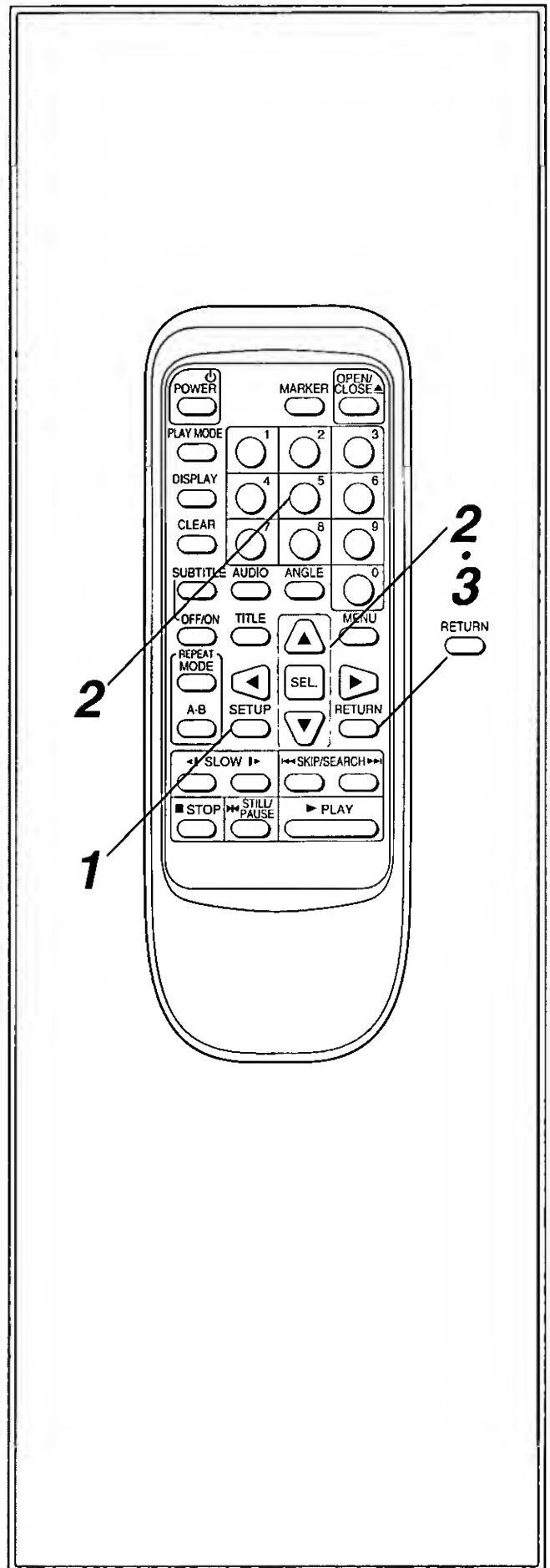
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

Press **RETURN**.

To finish the setup operation

Press **RETURN** when the "SETUP" screen is displayed.

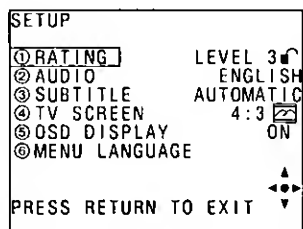


Initial settings

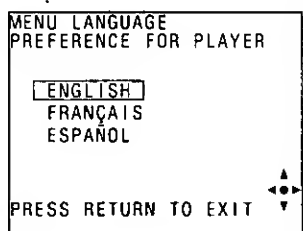
Menu language setting

You can select the language of the on screen display messages and disc menu messages of DVDs.

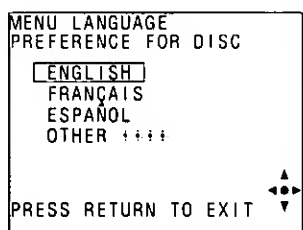
- 1 Press **SETUP** in the stop mode.



- 2 Press **▲/▼** or "6" to select "MENU LANGUAGE" and press **SEL**.



- 3 Press **▲/▼** to select the preferred language for the DVD player and press **SEL**.



OTHER ****:

Another language can be selected.

(Refer to the language codes on page 41. Press **CLEAR** if an incorrect language code is entered.)

- 4 Press **▲/▼** to select the preferred language for the DVD discs and press **SEL**.

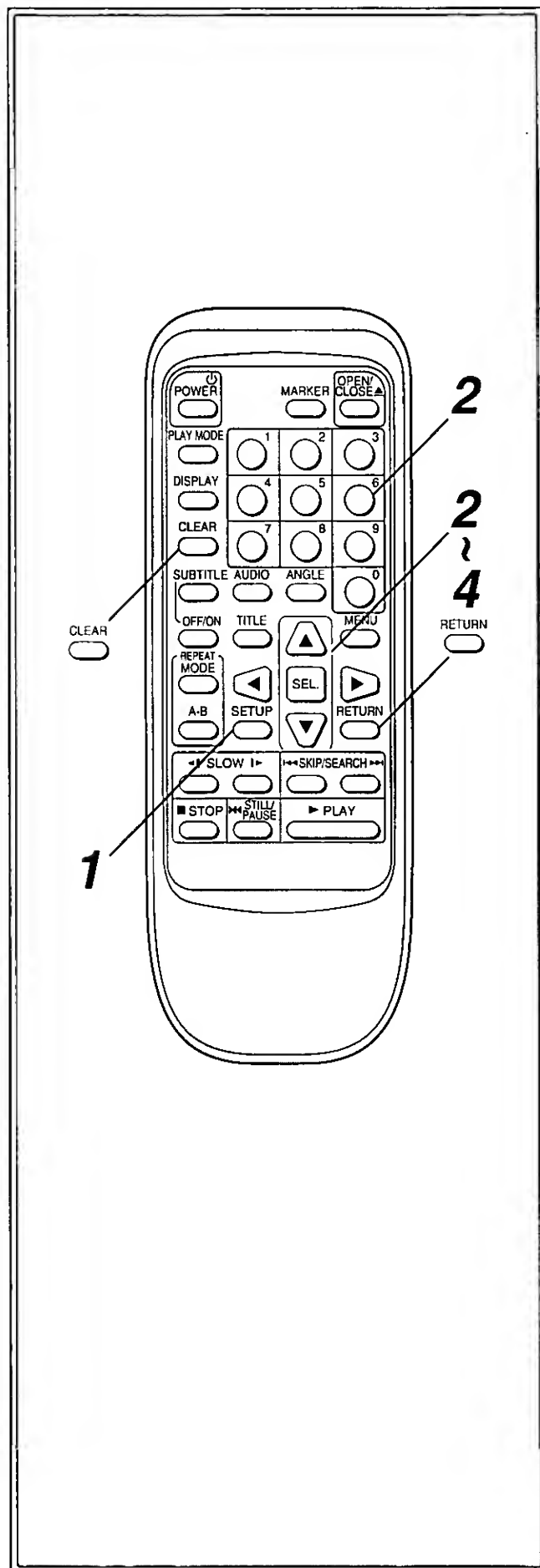
Setting is finished and the "SETUP" screen is displayed.

To return the TV monitor to the "SETUP" screen

Press **RETURN**.

To finish the setup operation

Press **RETURN** when the "SETUP" screen is displayed.



Language code list

Enter the appropriate code number for the initial settings "AUDIO", "SUBTITLE" and/or "MENU LANGUAGE" (see pages 36, 37 and 40).

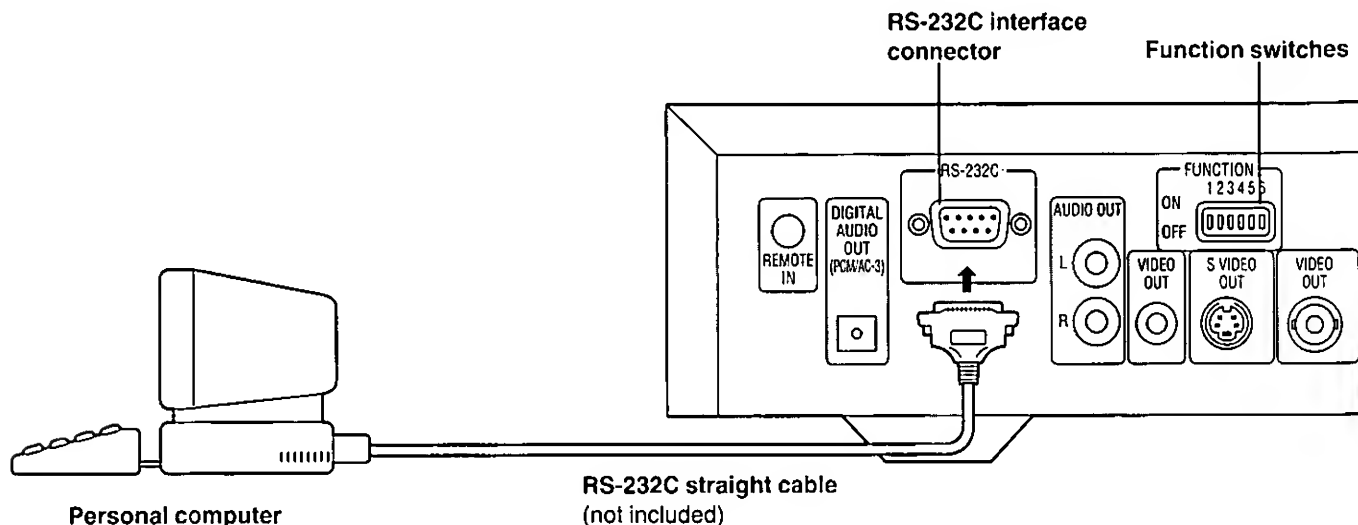
Code	Language Name	Code	Language Name	Code	Language Name	Code	Language Name
6565	Afar	7079	Faroese	7678	Lingala	8375	Slovak
6566	Abkhazian	7082	French	7679	Laothian	8376	Slovenian
6570	Afrikaans	7089	Frisian	7684	Lithuanian	8377	Samoan
6577	Ameharic	7165	Irish	7686	Latvian, Lettish	8378	Shona
6582	Arabic	7168	Scots Gaelic	7771	Malagasy	8379	Somali
6583	Assamese	7176	Galician	7773	Maori	8381	Albanian
6588	Aymara	7178	Guarani	7775	Macedonian	8382	Serbian
6590	Azerbaijani	7185	Gujarati	7776	Malayalam	8385	Sundanese
6665	Bashkir	7265	Hausa	7778	Mongolian	8386	Swedish
6669	Byelorussian	7273	Hindi	7779	Moldavian	8387	Swahili
6671	Bulgarian	7282	Croatian	7782	Marathi	8465	Tamil
6672	Bihari	7285	Hungarian	7783	Malay	8469	Telugu
6678	Bengali; Bangla	7289	Armenian	7784	Maltese	8471	Tajik
6679	Tibetan	7365	Interlingua	7789	Burmese	8472	Thai
6682	Breton	7378	Indonesian	7865	Nauru	8473	Tigrinya
6765	Catalan	7383	Icelandic	7869	Nepali	8475	Turkmen
6779	Corsican	7384	Italian	7876	Dutch	8476	Tagalog
6783	Czech	7387	Hebrew	7879	Norwegian	8479	Tonga
6789	Welsh	7465	Japanese	7982	Oriya	8482	Turkish
6865	Danish	7473	Yiddish	8065	Panjabi	8484	Tatar
6869	German	7487	Javanese	8076	Polish	8487	Twi
6890	Bhutani	7565	Georgian	8083	Pashto, Pushto	8575	Ukrainian
6976	Greek	7575	Kazakh	8084	Portuguese	8582	Urdu
6978	English	7576	Greenlandic	8185	Quechua	8590	Uzbek
6979	Esperanto	7577	Cambodian	8277	Rhaeto-Romance	8673	Vietnamese
6983	Spanish	7578	Kannada	8279	Romanian	8679	Volapük
6984	Estonian	7579	Korean	8285	Russian	8779	Wolof
6985	Basque	7583	Kashmiri	8365	Sanskrit	8872	Xhosa
7065	Persian	7585	Kurdish	8368	Sindhi	8979	Yoruba
7073	Finnish	7589	Kirghiz	8372	Serbo-Croatian	9072	Chinese
7074	Fiji	7665	Latin	8373	Singhalese	9085	Zulu

Initial Settings

For Your Reference

Computer remote control

Connecting your personal computer to the DVD player by using a RS-232C cable (as shown in the diagram) enables computer control of various playback functions.



RS-232C Interface connector specifications

Connect your personal computer to the RS-232C interface connector for external control.

(1) RS-232C specifications

Transmission speed: 1200/2400/4800/9600 bps
 Data length: 8 bits
 Parity: None
 Stop bit: 1 bit
 Code: ASCII character and control code


(2) Function switch settings

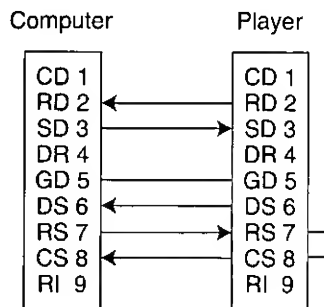
Set the series of function switches on the rear panel of the DVD player for the option to work.

	Function	Setting		
SW1	Baud_Rate Mode (RS-232C)	SW1	SW2	Baud_Rate
SW2		OFF	OFF	9600 bps
		ON	OFF	4800 bps
		OFF	ON	2400 bps
		ON	ON	1200 bps
SW3	Reserved	OFF Only		
SW4	Reserved	OFF Only		
SW5	OSD disabled ON/OFF	ON	OSD disabled ON	
		OFF	OSD disabled OFF	
SW6	Reserved	OFF Only		

(3) RS-232C connection

Connector type: D-sub9 pin

Pin	Signal
1	(Open)
2	RD (Output)
3	SD (Input)
4	(Open)
5	GD (Ground)
6	DS (H level fixing)
7	RS  (Short)
8	CS
9	(Open)



(4) RS-232C transmission protocol

4-1) Command for data transmission to player

a) Single command

[STX] Command 1 (:Parameter 1) [ETX]

- The item enclosed by parentheses "()" is optional information and can be ignored.

b) Multiple command

[STX] Command 1 (:Parameter 1); Command 2 (:Parameter 2); ...[ETX]

- The colon ":" and the semi-colon ";" delimit the parameter and the command respectively.
- [STX] and [ETX] are control commands for 02H and 03H respectively.

4-2) Player completion response command list

a) Normal command reception:

[ACK] (06H)

b) Abnormal command reception:

[NACK] (15H)

c) After command execution, the received command is sent back:

[STX] Command 1 [ETX]

d) Command error:

[STX] ER*** [ETX]

Computer remote control

(5) Command lists

NO	Command	Function	Audio CD	Video CD	DVD
1	PON	Power On	○	○	○
2	POF	Power Off	○	○	○
3	OEJ	Eject	○	○	○
4	OCL	Close	○	○	○
5	OSA	Start	○	○	○
6	OSP	Stop	○	○	○
7	OPL (:Stop Address) Stop address=R** Stop address=C** Stop address=T*****	Play (To Stop Address) Track (CD-DA/VCD) Chapter (DVD) Time (DVD)	○ x x	○ x x	x ○ ○
8	OPT:Stop address Stop address=R** Stop address=C** Stop address=T*****	Play To Stop Address Track (CD-DA/VCD) Chapter (DVD) Time (DVD)	○ x x	○ x x	x ○ ○
9	OPA	Pause	○	○	○
10	OTF	Still Forward	○	○	x
11	OMF:/4 (:Stop address) Non stop address Stop address=R** Stop address=C** Stop address=T*****	Forward Slow Play (To Stop Address) Track (CD-DA/VCD) Chapter (DVD) Time (DVD)	x x x x	○ ○ x x	○ x ○ ○
12	OMR:/2 (:Stop address) Non stop address Stop address=C** Stop address=T*****	Backward Slow Play (To Stop Address) Chapter (DVD) Time (DVD)	x x x	x x x	○ ○ ○
13	OCF	Scan Forward	○	○	○
14	OCR	Scan Backward	○	○	○
15	OAC	All Clear	○	○	○
16	OPB:* *=N *=P *=D *=R *=S**	Play Back Control Play Next Previous Default Select Return Select Number**	x	○	x
17	ODV:** **=TT **=MN **=SD **=S** **=RT **=UP **=LW **=LF **=RG **=NX **=PV	DVD Play Back Control Title Menu Current Button Select Select Button Number** Return Upper Button Select Lower Button Select Left Button Select Right Button Select Next Chapter Play Previous Chapter Play	x	x	○

NO	Command	Function	Audio CD	Video CD	DVD
18	SRS:Search address Search address=R** Search address=D** Search address=C** Search address=T*****	Search And Still (Pause) Track Search Title Search Chapter Search Time Search	○ × × × ×	○ × × × ×	× ○ ○ ○ ○
19	SRP:Search address Search address=R** Search address=D** Search address=C** Search address=T*****	Search And Play Track Search Title Search Chapter Search Time Search	○ × × × ×	○ × × × ×	× ○ ○ ○ ○
20	MRP:* *=0 *=1 *=4	Repeat Repeat Off Side Repeat (CD-DA/VCD) Title Repeat (DVD) Track Repeat (CD-DA/VCD) Chapter Repeat (DVD)	○	○	○
21	MKL:* *=0 *=1	Key Lock Key Lock Off Key Lock On	○	○	○
22	MIS:E:***** E*=E1:* *=11 *=12 *=13 E*=E2:***** ****=0 ****=1 ****=2 ****=3 ****=Language Code E*=E3:***** ****=0 ****=1 ****=2 ****=3 ****=Language Code E*=E4:* *=1 *=2 *=3 E*=E5:***** ****=1 ****=2 ****=3 ****=Language Code	Initial Set Parental Set Kids' Titles Only Forbid Adult Titles Play All Titles Audio Language Set Original English French Spanish Other Subtitle Language Set Automatic English French Spanish Other TV Screen Set 4:3 Letter Box 4:3 Pan Scan 16:9 Menu Language Set English French Spanish Other	×	×	○
23	MPT:* *=1 *=2	Change Parental Level Temporary Don't Change Parental Level Temporary	×	×	○

(Continued on the next page)

For Your Reference

Computer remote control

NO	Command	Function	Audio CD	Video CD	DVD
24	ZSM:Stop address Stop address=R** Stop address=C** Stop address=T*****	Track (CD-DA/VCD) Chapter (DVD) Time (DVD)	○ × ×	○ × ×	× ○ ○
25	DFL:* *=0 *=1	Display FL Display Off Display On	○	○	○
26	XDS:* *=0 *=1	Display OSD Display Off Display On	○	○	○
27	AST:* *=N (N=1-8)	Audio Stream Change Audio Stream N Select	×	×	○
28	AMD:* *=1 *=2 *=3	Audio Channel Select Lch (VCD)/Vocal Off (DVD) Rch (VCD)/Vocal On (DVD) Stereo (VCD)	×	○	○
29	VAG:* *=N (N=1-9)	Video Angle Change Angle N Select	×	×	○
30	XST:* *=0 *=99 *=N (N=1-32)	Subtitle On/Off And Change Subtitle Off Subtitle On Subtitle N Select	×	×	○
31	RON:* *=7 *=6 *=5 *=4 *=3 *=2 *=1 *=0	Online Mode Set ACK Completion status Error status × × × × × ○ × ○ × × ○ ○ ○ × × ○ × ○ ○ ○ × ○ ○ ○	○	○	○
32	ROF	Off Line Set	○	○	○
33	QPS	Play Status Request S1S2=00 DISC TRAY OPEN S1S2=01 SET UP S1S2=03 STANDBY (STOP) S1S2=04 SEARCH S1S2=05 PAUSE S1S2=06 PLAY S1S2=08 SLOW S1S2=09 SCAN S1S2=0A AUTO STILL S1S2=FF POWER OFF	○	○	○

NO	Command	Function	Audio CD	Video CD	DVD
34	QDS	Disc Status Request S1S2 S1=0 No Disc on the Disc Tray S1=1 Disc on the Disc Tray S1=? Unidentified S2=0 Audio CD S2=4 Video CD S2=6 DVD S2=? Unidentified	○	○	○
35	QTA:** **=D0 **=D1-99 **=C0 **=C1	Toc Request Title Number Chapter Number in the Title First Track Number Last Track Number	×	×	○
36	QPA:** **=D0 **=D1 **=D2 **=C0 **=C1	Current Play Address Request Title Chapter Time Track Track Time	×	×	○
37	QIS:E* E*=E1 E*=E2 E*=E3 E*=E4 E*=E5	Initialize Setting Request Parental Set Audio Language Set Subtitle Language Set TV Screen Set Menu Language Set	×	×	○
38	QID	Model Number of Player Request	○	○	○
39	QRS	Online Mode Request **...Refer to RON	○	○	○
40	QES	Error Status Request ER*** **...Error Number	○	○	○
41	QRV	Rom Version Request	○	○	○
42	QAL	Address Level Request Return to Address Level 0	○	○	○
43	QIC	Category Request Return to Category 2	○	○	○

Troubleshooting

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers to locate a convenient service center, or consult your dealer for instructions in U.S.A. or refer to the dealer whom you have made your purchase from to locate a convenient service center in Canada.

(In U.S.A. consult MSC Authorized Servicenters for detailed instructions or call 1-800-526-6610 for the address of an authorized factory servicenter.)

Symptom (Common)	Remedy
No power.	Insert the power plug securely into the power outlet.
<ul style="list-style-type: none"> • Play fails to start even when PLAY is pressed. • Play commences but then stops immediately. 	<ul style="list-style-type: none"> • Condensation has formed: wait about 1 to 2 hours to allow the player to dry out. • This player cannot play discs other than DVDs, video CDs and audio CDs. • The disc may be dirty and may require cleaning. • Ensure that the disc is installed with the label side up.
No picture.	<ul style="list-style-type: none"> • Ensure that the equipment is connected properly. • Ensure that the input setting for the TV is "Video".
<ul style="list-style-type: none"> • No sound. • Distorted sound. 	<ul style="list-style-type: none"> • Ensure that the equipment is connected properly. • Ensure that the input settings for the TV and stereo system are correct. • No sound is heard during still picture (pause) or slow-motion play.
Picture is distorted during rapid advance or rapid reverse.	The picture will be somewhat distorted at times: this is normal.
No rapid advance (or rapid reverse) play.	Some discs may have sections which prohibit rapid advance (or rapid reverse).
No 4:3 (16:9) picture.	Choose the correct setup "TV SCREEN" item which matches the TV set used.
No on-screen display.	The OFF setting is selected for "OSD DISPLAY": select ON.
No operations can be performed with the remote control.	<ul style="list-style-type: none"> • Check the dry batteries are installed observing the correct polarities (+ and -). • The batteries have run down: replace them with new ones. • Point the remote control unit at the remote control sensor and operate. • Operate the remote control unit at a distance of not more than 7 meters (23 feet) from the remote control sensor. • Remove the obstacles between the remote control unit and remote control sensor.
No key operation (by the unit and/or the remote control) is effective.	Set the POWER button to OFF and then back to ON. Alternatively, turn off the power, disconnect the power plug and then re-connect it. (The player may not be operating properly due to lightning, static electricity or some other external factor.)
If you cannot solve your problem	Call our Customer Satisfaction Center at 1-800-524-1448 for further assistance in U.S.A. or contact the nearest authorized Panasonic service center in Canada.

Symptom [DVD]	Remedy
Play does not commence even when title is selected.	Confirm the setup "RATING".
Audio soundtrack and/or subtitle language is not the one selected at the initial settings.	If the audio soundtrack and/or subtitle language does not exist on the disc, the language selected at the initial settings will not be seen/heard.
The menu is displayed in French (example).	The setup "MENU LANGUAGE" is set to FRANÇAIS: select ENGLISH.

Symptom [DVD]	Remedy
No subtitles.	<ul style="list-style-type: none"> • Subtitles appear only with discs which contain them. • Subtitles are cleared from the TV monitor. Press SUBTITLE OFF/ON to display the subtitles.
Alternative audio soundtrack (or subtitle) languages fail to be selected.	<ul style="list-style-type: none"> • An alternative language is not selected with discs which do not contain more than one language. • In the case of some discs, the alternative language cannot be selected by operating the AUDIO or SUBTITLE button. Try selecting it from the DVD menu if one is available.
Angle cannot be changed.	This function does not work with discs on which a number of angles are not recorded. Even if a disc has a number of angles recorded, these angles may be recorded for specific scenes only.
The password for age restriction has been forgotten.	While the unit is in the stop mode, hold the unit's SKIP/SEARCH button and the STILL/PAUSE button down simultaneously and then hold the POWER button down for longer than 3 seconds (until "INITIALIZED" disappears from the TV monitor). The lock will be released and all initial settings will return to the default values.

Symptom [Video CD]	Remedy
No menu play.	This function works only for video CDs with playback control.

Self-diagnosis display function

When an error or trouble is detected during operation, a service number appears in the display window.
When a service number has appeared, check out the details given below.

Service number	Player status	Remedy
U11	Disc is dirty.	Wipe the disc clean.
H □ □	Trouble is likely to have occurred. The number following "H" differs depending on the status of the player.	<p>Set the POWER button to OFF and then back to ON. Alternatively, turn off the power, disconnect the power plug and then re-connect it.</p> <p>If the service number fails to be cleared even when the remedial action is taken, ask for the service engineer to repair the player.</p>

Product service

Do not attempt to remove the cover(s) or repair the unit yourself. Refer servicing to qualified personnel only. The servicer will require all components to service your system. Therefore, should service ever be necessary, be sure to bring the entire system.

Product information

For product service, product information or assistance with product operation, refer to the service center directory in U.S.A. or call the dealer whom you have made your purchase from in Canada.

If you ship the product

Carefully pack and send it prepaid, adequately insured and preferably in the original carton. Attach a postage-affixed letter, detailing the complaint, to the outside of the carton. **DO NOT** send the product to the Executive or Regional Sales offices. They are NOT equipped to make repairs.

Disc handling and maintenance

Handling precautions

- Hold the disc by the edges so the surface will not be soiled with fingerprints. **(A)**
Fingerprints, dirt and scratches can cause skipping and distortion.
- Do not write on the label side with a ball-point pen or other writing utensils.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Be careful not to drop or bend the disc.
- Do not install more than 1 disc on the disc tray.
- Do not try to close the disc tray when the disc is not installed properly. **(B)**
- Be sure to store the disc in its exclusive case when not in use.

If the surface is soiled **(C)**

Wipe gently with a soft, damp (water only) cloth.
When wiping discs, always move the cloth from the center hole toward the outer edge.
(If you wipe the discs using a circular motion, circular scratches are likely to occur, which will cause noise.)

If the disc is brought from a cold to a warm environment, moisture may form on the disc

Wipe this moisture off with a soft, dry, lint-free cloth before using the disc.

Improper disc storage

You can damage discs if you store them in the following places:

- Areas exposed to direct sunlight
- Humid or dusty areas
- Areas directly exposed to a heat outlet or heating appliance

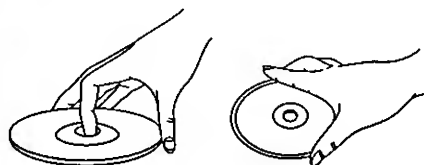
Discs which cannot be played with this player

- CD-ROM
- CDV
- CD-G
- DVD with a Locale No. other than #1
- DVD of PAL system
- Do not try to play Photo CD or CD-R.

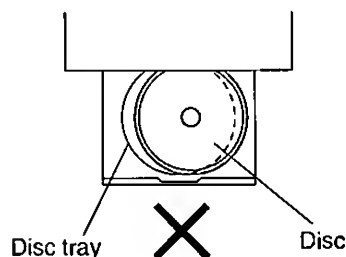
Maintenance

- Be sure to turn the power button OFF and disconnect the power plug before maintaining the unit.
- Wipe this unit with a dry soft cloth.
If the surfaces are extremely dirty, wipe clean with a cloth which has been dipped in a weak soap-and-water solution and wrung out thoroughly, and then wipe again with a dry cloth.
- Never use alcohol, benzine, thinner, cleaning fluid or other chemicals. And do not use compressed air to remove dust.

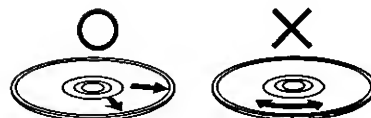
A



B



C



Definition of terms

Angle

Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.). With such discs, the **ANGLE** button can be used to view the scene from different angles.

Chapter number

These numbers are recorded on DVD discs. A title is subdivided into many sections, each of which is numbered, and specific parts of video presentations can be searched quickly using these numbers.

DVD

This refers to a high-density optical disc on which high-quality pictures and sound have been recorded by means of digital signals. Incorporating a new video compression technology (MPEG II) and high-density recording technology, DVD enables esthetically pleasing full-motion video to be recorded over long periods of time (for instance, a whole movie can be recorded).

DVD has a structure consisting of two 0.6 mm thin discs which are adhered to each other. Since the thinner the disc, the higher the density at which the information can be recorded, a DVD disc has a greater capacity than a single 1.2 mm thick disc. Since the two thin discs are adhered to each other, there is the potential to achieve double-sided play sometime in the future for even longer duration play.

Playback control

This is recorded on a video CD (version 2.0). The scenes or information to be viewed (or listened to) can be selected interactively with the TV monitor by looking at the menu shown on the TV monitor.

Subtitles

These are the printed lines appearing at the bottom of the screen which translate or transcribe the dialogue. They are recorded on DVD discs.

Time number

This indicates the play time which has elapsed from the start of a disc or a title. It can be used to find a specific scene quickly. (It may not work with some discs.)

Title number

These numbers are recorded on DVD discs. When a disc contains two or more movies, these movies are numbered as title 1, title 2, etc.

Track number

These numbers are assigned to the tracks which are recorded on video CDs and audio CDs. They enable specific tracks to be located quickly.

Video CD

This contains recordings of pictures and sound whose quality is on a par with that of videotape. This player also supports video CDs with playback control (version 2.0).

Specifications

Power requirements:	AC 120 V, 50–60 Hz
Power consumption:	20 W (approx. 3.5 W when power is OFF)

Signal system:	NTSC
Weight:	7.92 lbs. (3.6 kg)
Dimensions:	16 $\frac{15}{16}$ " (W)×3 $\frac{1}{2}$ " (H)×11 $\frac{3}{8}$ " (D) [430 (W)×87.5 (H)×288 (D) mm] (excluding protrusions)

Operating temperature range:
+5 to +35 °C (+41 to +95°F)

Operating humidity range:
5 to 90% (no condensation)

Discs played:

(1) DVD-video disc

- 5" (12 cm) single-sided, single-layer
- 5" (12 cm) single-sided, double-layer
- 5" (12 cm) double-sided, double-layer
(one layer per side)
- 3" (8 cm) single-sided, single-layer
- 3" (8 cm) single-sided, double-layer
- 3" (8 cm) double-sided, double-layer
(one layer per side)

(2) Compact disc (CD-DA, video CD)

- 5" (12 cm) disc
- 3" (8 cm) disc

S-video output connector (separate YC signal output connector):

- Y output: 1 Vp-p (with 75Ω load, sync, negative polarity)
- C output: 0.286 Vp-p

Video signal output: 1 Vp-p (with 75Ω load, sync, negative polarity)

Audio signal output: 200 mVrms (1 kHz, –20 dB)

Audio signal output characteristics:

DVD linear audio:

- (1) Frequency response:
 - 48 kHz sampling: 4 Hz to 22 kHz
 - 96 kHz sampling: 4 Hz to 44 kHz
- (2) S/N ratio: 106 dB
- (3) Dynamic range: 96 dB
- (4) Wow & flutter: Below measurable limits
- (5) Total harmonic distortion: 0.003%

CD audio:

- (1) Frequency response: 4 Hz to 20 kHz
- (2) S/N ratio: 106 dB
- (3) Dynamic range: 96 dB
- (4) Wow & flutter: Below measurable limits
- (5) Total harmonic distortion: 0.003%

PHONES jack: 32Ω (30 mW), min. 8Ω matching impedance

Pickup: Wave length: 655 nm
Laser power: CLASS II

Specifications are subject to change without notice.
Weight and dimensions are approximate.

Locale management information

Locale Management Information: This DVD player is designed and manufactured to respond to the Locale Management Information that is recorded on a DVD disc. If the Locale number described on the DVD disc does not correspond to the Locale number of this DVD player, this DVD player cannot play this disc.

The locale number for this DVD player is Locale #1.



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